The Orchadian

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Official Journal of the Australasian Native Orchid Society

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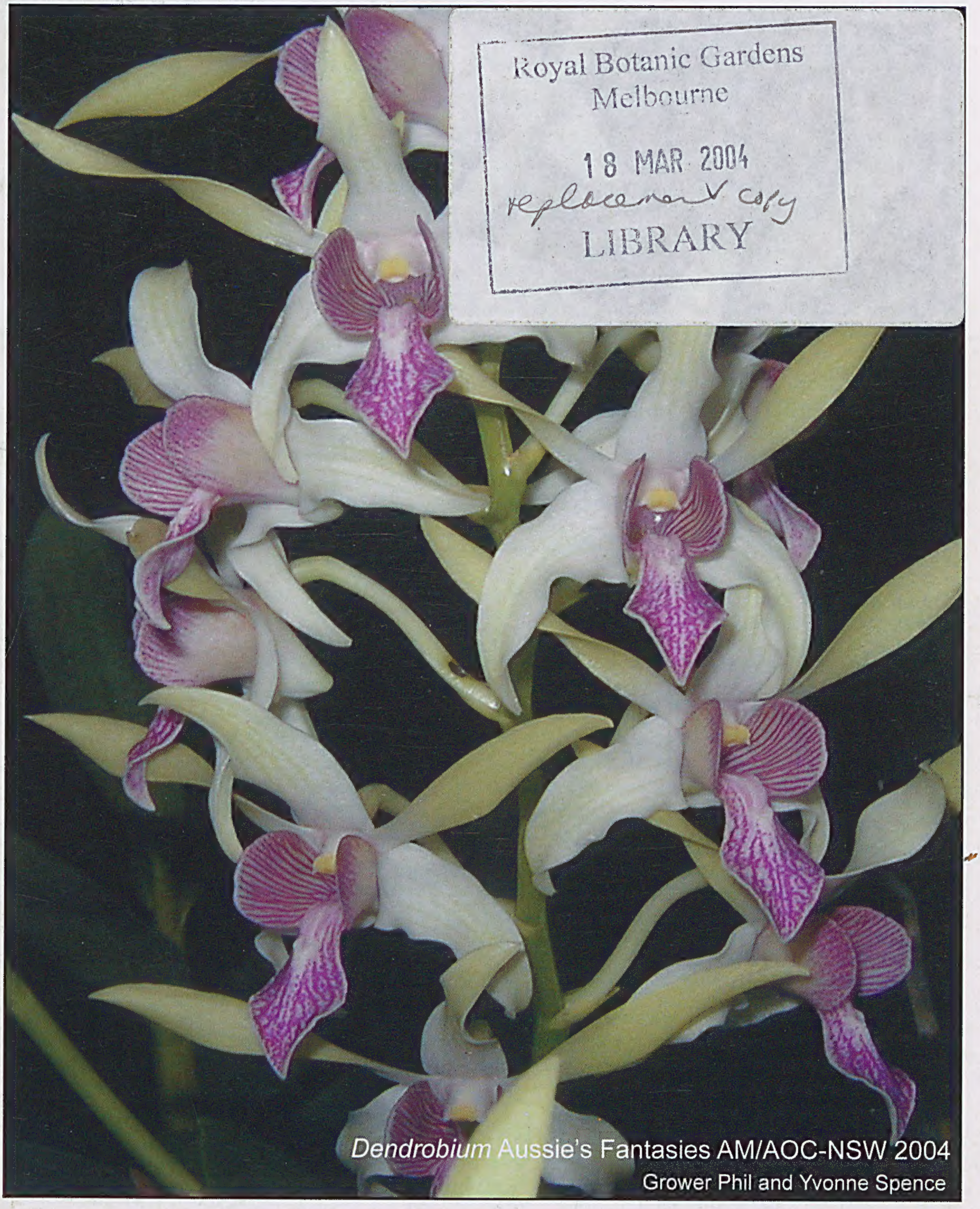

Dendrobium Aussie's Fantasies AM/AOC-NSW 2004
Grower Phil and Yvonne Spence

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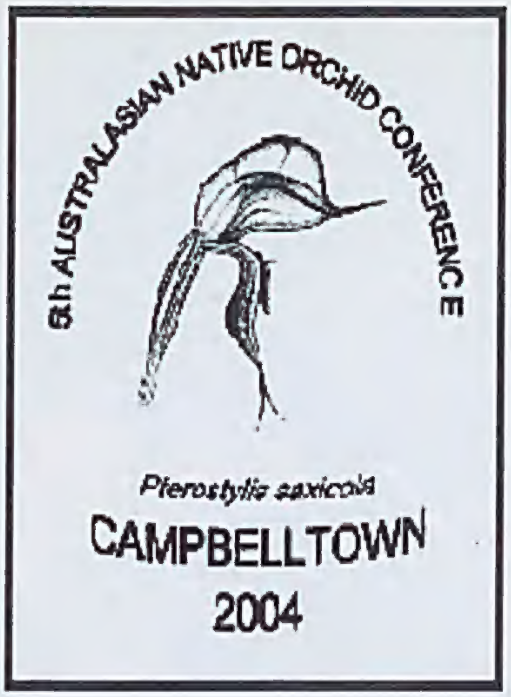
CONTENTS

Features

Dendrobium Aussie Spectrum No1 .... Wolf Grausch 292
Dr Peter Lavarack, AOF Research Committee Chairman 293
AOF Award of Honour, Dr Peter Stanley Lavarack 294
Editorial and AOF Fundraiser 295
ANOS Geelong Group
Sarcanthinae Show Report .... Frances Wilde 297
ANOS Geelong Group,
Life Membership to Ray Laidlaw .... Frances Wilde 298
ANOS Victorian Group, embraces the 21st century
.... Helene Wild 298
Observations on a small Caladenia species in the
Wide Bay region of South East Queensland .... Alan Logan 303
Ira Butler Trophies for 2003 ....Roslyn Capell 306
Orchids of the Paluma and Crystal Creek area ....
.... Dr Peter S Lavarack 310
Acianthella, a new genus in the *Acianthus* alliance
.... David L. Jones 330

Photographs

Dendrobium Aussie's Fantasies AM/AOC-NSW 2004 . Front Cover
Dendrobium Aussie Spectrum No. 1 292
Historic photo AOF Research Committee 293
Sarcochilus Melba 296
Sarcochilus hartmannii (Kerri x Numinbah Valley) 296
Caladenia sp. affin. *aurantiaca* 305
Caladenia alata 305
Sarcochilus Yvette 'Jake's Pride' HCC-AD/OSCOV 308
Dendrobium speciosum var. *speciosum* 'National White' x
Dendrobium speciosum var. *curvicaule* 'Neils Pick' 309
Dendrobium speciosum var. *grandiflorum* 'Jelita' 309
Paluma and Crystal Creek habitat photos .... 312 and 313
Dendrobium agrostophyllum 320
Caladenia carnea 320
Habenaria humpii 320
Habenaria propinquior 320
Paluma Area Map 328
Dendrobium speciosum var. *curvicaule* 329
Photos from AOF Fundraiser .... 333 and Back Cover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Speakers

Speaker	**Subject**
James Indsto	Diuris Pollination
John Woolf	Sarcochilus Breeding
David P Banks	Contemporary Australasian Orchid Literature
Geoff Stocker	Papua New Guinea Orchids
Kevin Western	Conservation Etc
Peter McCaulay	Native Orchid Conservation Through the use of Aseptic Symbiotic Techniques
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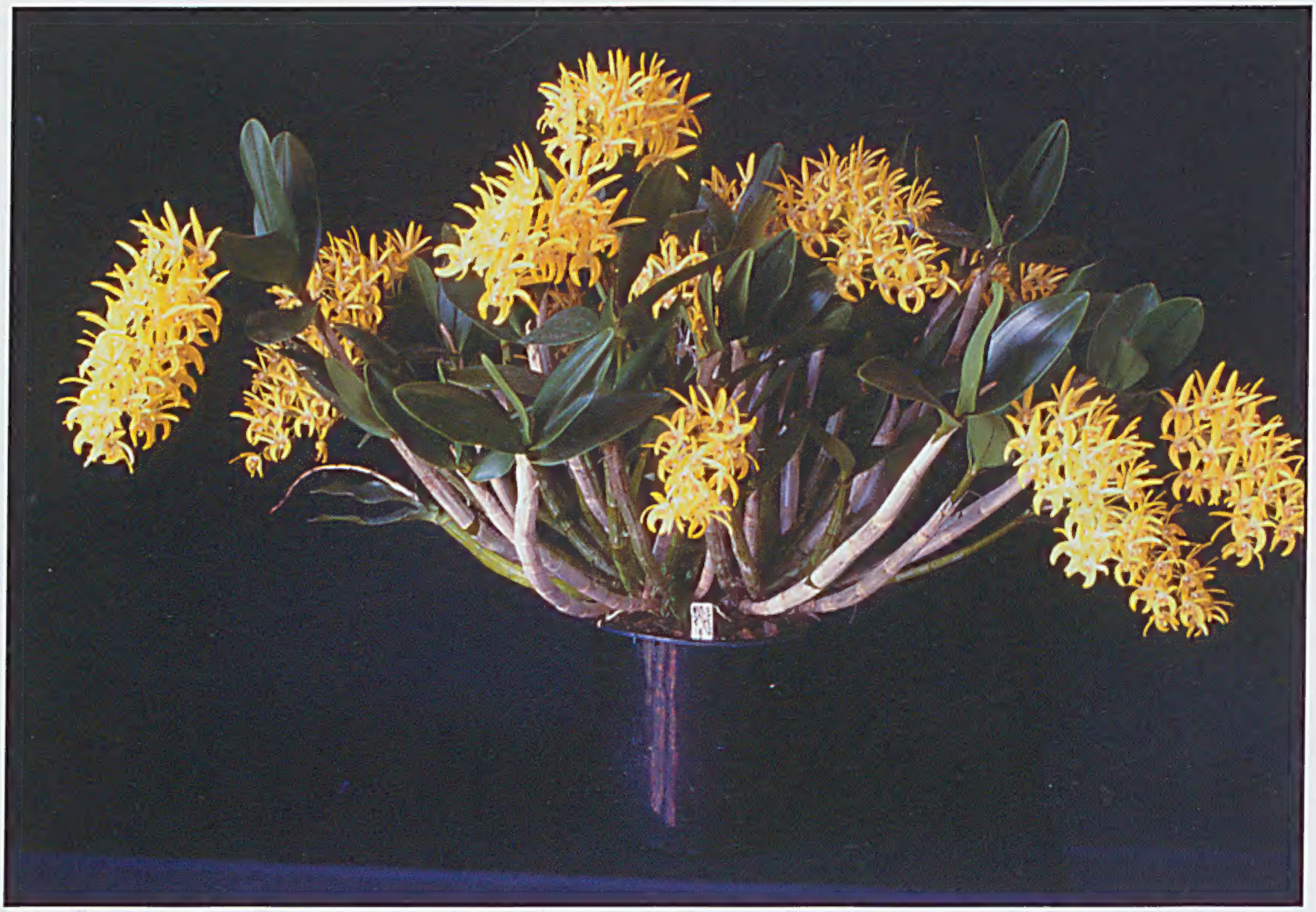

Photo Wolf Grausch

Dendrobium Aussie Spectrum No. 1

A tribute to Australian Dendrobium breeding.

Wolf Grausch
33 Newhaven Tce
Mairangi Bay, Auckland
New Zealand

This plant won Best Dendrobium in the NZOS Spring Show 2003. I would like to bring it to the attention of my Australian friends and offer some personal comments.

This orchid had over three hundred flowers on twenty racemes. The flower size was around 50 mm, with the flower being open and quite flat, and the colour was of a deep gold.

The cross was registered in 1983 by Mr. Phil Spence. *Dendrobium* Aussie Spectrum is a hybrid between *D.* Peter and *D. speciosum*, *D.* Peter is a primary hybrid between *D. fleckeri* and *D. falcorostrum*. The three species with form, vigour and plenty of colour.

I prefer this line of breeding to some newer lines with the infusion of tropical Dendrobiums, where one needs research and experimentation just to keep them alive, under my conditions anyhow. *D.* Aussie Spectrum grows easily in a shadehouse here in Auckland, cool with little attention.

We know what happens when it is crossed further with *D.* Hilda Poxon and another dose of *D. speciosum*, we will get *D.* Avrils Gold.

So what an incredible line this is, one can only hope that there is more to come.

-oOo-

Original Members of the AOF Research Committee of which Bill was Chairman. Photo taken in the Canberra Botanic Gardens in February 1977. Photo Gerald McCraith AM

The Members were (left to right) Don Blaxell, Len Lawler, John Wrigley, Bill Lavarack, David Jones and Alex George.

Australian Orchid Foundation
Award of Honour
presented to
Dr Peter Lavarack

Dr. Peter Lavarack, known to everyone as 'Bill', grew up on a pineapple farm near Nambour on Queensland's Sunshine Coast in the 1950s. Here he developed an interest in the native orchids, which grew in abundance locally. He attended Queensland University and gained a Ph.D. degree majoring in numerical taxonomy of orchids.

His work over the years included surveys of Cape York Peninsula resulting in the gazettal of several large national parks. He led scientific expeditions to Cape York and Torres Strait for the Australian Orchid Foundation, during which several new orchids were discovered and much data on the distribution of orchids recorded.

In recent years he has compiled management plans for national parks in tropical Queensland and was responsible for drafting legislation for the protection of rare and threatened plants, including orchids.

He is the author of four books and about one hundred papers, both popular and scientific, mostly on orchids. Now retired, he lives with his wife Beverley in Townsville.

Nominated for this Award by Len Lawler, Wal Nicholson and Roy Robinson.

-oOo-

AUSTRALIAN ORCHID FOUNDATION

Award of Honour for 2003

granted to

Peter Stanley Lavarack

For outstanding work in the field of orchids

The granting of this award recognizes:

That he has served on the A.O.F. Research Committee since its inception and was Chairman for a period.

That during his career with the Queensland National Parks and Wildlife Service he conducted surveys and developed management plans for Hinchinbrook Island and Cape York Peninsula, thus laying the foundations for the declaration of several national parks.

That under the joint auspices of the A.O.F. and the Queensland National Parks and Wildlife Service he conceived, planned and led eight expeditions, which surveyed the orchid population of the Cape York Peninsula and some Torres Strait islands. This work ensured that many significant orchid habitats were included in national parks.

That his recording and collection of herbarium specimens of orchids enabled the recognition of new species, the rectification of taxonomic anomalies and the revision of our knowledge of distribution.

That his role in drafting plant protection legislation for the state of Queensland ensured the inclusion of measures to safeguard wild populations of orchids.

That his writings on orchids include four books, thirty six major departmental reports, fifty papers in scientific journals and fifty two papers of a popular nature.

That he is held in great respect and high regard by all within the Australian and worldwide orchid fraternity.

Mrs Helen Richards	Mr Gerald McCraith AM	Mr Eric Wilde	Ms Barbara Duncan
Chairperson of Directors	Executive Director	Director/Treasurer	Hon. Secretary

Editorial

With this issue you should have received a renewal form for 2004-2005. We have cancelled any leave for our Treasurer so do him a favour and return your renewal as quick as possible. We still only have around six hundred members so have a chat with your friends and encourage them to join up. We rally need to have around one hundred more members.

Again, in this issue we have a wonderful article about an orchid rich area. This time in Far North Queensland, a paper Dr Peter Lavarack had to prepare for the Queensland National Parks and Wildlife Service. We have the Ira Butler Results for 2003 and Wolf Grausch from New Zealand gives a glimpse of what their doing across the Tasman. From, The Australian Orchid Foundation we have details on the Award of Honour presented to Dr Peter Lavarack. Alan Logan shows us a curious little orchid from his area in SE Queensland, and the Victorians have some news from their Groups.

We end up with a paper from David Jones in Canberra, detailing changes to some of our orchids. So I hope you enjoy this issue and I would like to thank Bill Dobson, Murray Corrigan Chris and Rona Wareing for their help in getting this issue out and special thanks to all those who have supplied material for this issue.

Peter Eygelshoven, Editor.

Special Orchid Social Day, on the Central Coast.

Phil and Yvonne Spence hosted a wonderful day at their home in Wamberal, on the Central Coast of New South Wales. It turned out to be a day full of surprises. As we arrived we were informed that the day was to raise funds for the Australian Orchid Foundation (AOF). Proceeds from raffles held throughout the afternoon went to the AOF, $600 was raised. Then we were introduced to Gerald McCraith, who came from Victoria for the weekend. Gerald offically opened the afternoon with some orchid tales and a short history of the AOF.

After a wonderful lunch and speech from Gerald McCraith, Brian Gerhard and Angie Sulfaro held the first of three raffles, and in between these we saw Phil present Peter Fetherston and Barry Collins with seedlings named in their honour. *Dendrobium* Peter Fetherston is *D.* Val Peck x *D.* Colonial Bullion and *D.* Barry Collins is *D.* Aussie Zest x *D.* Star of Gold, these were registered in 2003 by Phil.

We then, after the next raffle, had walk through Phil's bush house were some Judges from OSNSW came across an orchid they felt was worthy of judging. *Dendrobium* Aussie's Fantasies, a cross Phil registered in 2002 between *D. engae* and *D. stratiotes*, was awarded a high AM (84.4). *Dendrobium* Aussie's Fantasies photo front cover and other photos on page 333 and back cover. This was a wonderful afternoon and I'm sure all those there will join me saying thank you to Phil and Yvonne for a great time.

Phil also registered two other orchids in 2003, *Dendrobium* Bob Napier, (*D.* Eureka x *D.* King-Wong) and *Dendrobium* Janet Napier, (*D.* Berry x *D.* Colonial Bullion). These were named to recognise the work that Bob and Janet gave to ANOS over the past thirty or so years

Peter Eygelshoven

Sarcochilus Melba grower DUNO

Photos Eric Wilde

Sarcochilus hartmannii
Grand Champion ANOS Geelong Show 2003

Frances Wilde receiving the Champion Trophy

A.N.O.S. Geelong Group Sarcanthinae Show report 2003.

Well, what a nice surprise we had after the weather bureau predicted strong winds and rain all weekend, plus the fact everyone had been letting me know their orchids weren't going to be out for the show. As the day progressed on Friday 31st October, even though they were right about the rain, it was evident members had really outdone themselves bringing in all the orchids they could muster to help make our show a spectacle for the public.

There were two hundred and forty five plants entered for the competition and many more used as fill-ins, plus an added attraction of a whole wall of cacti and succulents - one display put on by Denise and Gordon Richards and the other by Chris Hack, everyone admired these plants and wanted to buy them.

For the first time in my memory we had eight pots of terrestrials on display, which included a very nice and showy pot of Diuris belonging to Mario and Faye Piovesan. One of our newer members Diane Visser received Champion Dendrobium of the show with a *Dendrobium kingianum* 'Stunning' x D. Rutherford Sunspot. The orchid was a pretty lilac colour, held itself erect and was also flowering for the first time, and I say to everyone - look out for this at a future date, it has a lot of potential.

This year we also added another major award to our schedule of the Pre-eminent Entry. This was going to be eligible to be won by a single plant or a collection of plants (a stand or basket). The inaugural winner this year was Luba Mishura who received this for her outstanding basket of well grown and colourful Sarcochilus.

We also have a section for Exotic orchids to give the public more to look at, and one of our members Don Bradshaw won Champion Any Other Genera with a *Masdevallia* Isbern 'Anne'. The Champion Sarcochilus plus Grand Champion Orchid of the Show was my *Sarcochilus hartmannii* (*S. hartmannii* 'Kerri' x *S. hartmannii* 'Numinbah Valley') cross. This flowered last year for the first time and at one stage I was considering to get rid of it, but then changed my mind and thought I would give it another year, how lucky can you be?

As Victoria does not have an A.N.O.S. Judging Panel, we asked some local AOC Judges to officiate at our show and we thank them for the time they spent with us. To give you a few statistics on the show, we had one hundred more people visit our show and an extra $100 was taken on our special effort than at any other show we have run. This always makes the Treasurer and the Committee happy.

Not only was the weather expected to be against us, we had decided to try a new venue for our show in a totally different area to where we have held them before, and needless to say some of us had the jitters. It proved to be a move in the right direction and the Committee is already thinking up ways to improve it yet again for next year.

Thank you to all who participated as without your help, it is very simple, we don't have a show.

Frances Wilde, President.

-oOo-

ANOS Newcastle Autumn Show

To be held at Club Macquarie, Lake Road, Argenton on the 8th and 9th of May, 2004. The main feature of this show is the *Dendrobium bigibbum* complex. It is held in conjunction with the Boolaroo Orchid Society. For more details contact
Peter Denning, 9475 3729
peterden@optusnet.com.au

Australasian Native Orchid Society - Geelong Group Life Membership to Ray Laidlaw

wilde@pipeline.com.au

At our December meeting which was held as a Christmas break-up party the groups first Honorary Life Membership was presented to Ray Laidlaw.

Ray was an inaugural member, having joined at the meeting in June 1987 when the group was formed.

Ray was elected to the Committee at that meeting and remained on Committee for thirteen years - during that time he was Secretary for one year, President for three years, Immediate Past President for three years and Vice President for four years - ending his term of office in the year 2000.

Not only has Ray helped form the Society that we have today, but he has also provided and cooked the meat for all of our barbeques which has been greatly appreciated by all members who attended those functions.

The Tuber bank was another of Ray's activities, he arranged the distribution of tubers supplied to our group and potted any remaining tubers for sale or presentation to members.

His help did not finish there - behind the scenes he stored and sold the bark to members, he supplied crockery etc for most of our groups activities and supported our shows with plants and gave his time freely during the weekends of our shows.

So to Ray - congratulations for a job well done and congratulations on being our first life member.

-oOo-

A.N.O.S. Victorian Group embraces 21st century magic!

Helene Wild
Bulletin Editor
56 Civic Parade, Seaholme, Victoria 3018
helene.wild@optusnet.com.au

When Peter Eygelshoven accepted the position of Editor of *The Orchadian* in 2002, he requested I write an article about the activities of A.N.O.S. Victorian Group to kick-start a series that he would present under the heading *What The Groups Are Doing!* My essay was duly published (September 2002, Volume 14, Number 1, pp7-9), so you have already read about the many and varied activities undertaken by our vibrant group.

During September 2003, the Victorian Group achieved thirty five years, but our birthday celebrations were postponed and combined with our last meeting of the year. At our December meeting Helen Richards, the member who has regularly attended meetings for the longest period of time, gave a slide-illustrated talk – a potted history of the Society's activities during those thirty five eventful years, and Sue Dilley donated a beautifully decorated birthday cake that was cut and shared amongst members during our bumper end-of-year supper.

However, our 35th year saw one of the most exciting changes in our group's history – the introduction of a full colour Electronic *Bulletin*. During her presentation, Helen showed her audience several examples of the Society's *Bulletin* – from our very first four-page roneo version (printed on a messy, monstrous, finger-staining Gestetner®), through many changes and upgrades, to the latest fourteen page greyscale photocopied version that members receive via Australia Post. Then, with a flourish, she held aloft the full-colour version that members can receive by e-mail. A.N.O.S. Victorian Group has embraced 21st century magic!

Following several months of experimentation to perfect our transmission techniques, in April 2003 the Victorian Group Committee offered all members the opportunity to receive an Electronic *Bulletin* each month. The benefits of the *Bulletin* in this form are that members receive a full colour copy that should arrive earlier than the printed copy, plus members have the advantage of being able to easily search for articles using applications that search files for key words. The Electronic *Bulletin* is provided in PDF format, so to be able to read and print it, members need access to a computer and a colour printer, an e-mail account and a copy of Acrobat Reader installed on their computer. Acrobat Reader is a free application and can be downloaded from http://www.adobe.com/products/acrobat/readstep2.html The Electronic *Bulletin* is somewhere between 500Kb and 2Mb in size each month, depending upon the number and size of the photographs included in each issue. To be able to receive the Electronic *Bulletin*, your e-mail must be able to receive single e-mails up to 2Mb in size. Note that hotmail e-mail account users have experienced problems when the *Bulletin* has been about 1Mb in size.

Members who have opted for the Electronic *Bulletin* also receive a reduction in their annual subscriptions, reflecting the Society's savings in printing and postage costs. They reckon they are in a win, win situation!

During the 2003 year, the A.N.O.S. Victorian Group Committee was informed that stock of our pre-printed *Bulletin* cover was getting low and would run out towards the end of the year. In common with other non-profit organisations, our Society's general expenses have increased dramatically over the past few years and, when the question of re-ordering our (expensive) pre-printed covers arose, the Committee agreed this was an area where significant savings could be made. Then the Committee agreed this was an appropriate time to update our newsletter and to also create a new official logo, so I was invited to submit a design to replace the existing black and white line drawing of *Calochilus richiae*, our official floral emblem.

Calochilus richiae is an endangered Victorian terrestrial orchid that is not known in cultivation. I couldn't paint from life, so I searched for a suitable photograph on which to base my watercolour, and Jeff Jeanes (brilliant photographer and co-author of *The Orchids of Victoria*) came up trumps. His image was absolutely perfect! But instead of using it as a guide for a painting, with Jeff's permission our resident computer software consultant (our son Montgomery) created the lovely colour logo that is now featured on the top left hand corner of our new *Bulletin* cover.

Now we come to the point of this excise! The A.N.O.S. Victorian Group executive is hoping our magnificent, informative *Bulletin* will attract the attention of native orchid enthusiasts, not only from Melbourne and country Victoria, but also from interstate and overseas. So here is the crunch line:
Annual subscription for the black and white (posted) version of the *Bulletin* is $24 per year ($34 for overseas members).
Annual subscription for the full-colour e-mailed Electronic *Bulletin* is $18 worldwide. (Subscription covers the financial year from 1st of July to 30th of June. However, those joining on or after the 1st of January pay half the annual subscription until subscription renewal comes around again, i.e. $12, $17 or $9 respectively.)
Membership enquiries should be directed to, Stefania Viglione, Membership Secretary, 97 Christmas Street, Northcote 3070, telephone (03) 9489-0683 ninostef@labyrinth.net.au However, if you would like to receive one complimentary copy of the Electronic *Bulletin* for assessment, contact me at helene.wild@optusnet.com.au

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Observations on a small *Caladenia* sp (affin. *C. aurantiaca*) in the Wide Bay region of South East Queensland.

Alan Logan
84 Limpus St
Urangan, Qld 4655

The *Caladenia carnea* R.Br group of small flowered terrestrial orchids contain several undescribed forms or closely related species. Two of the latter, *C. alata* R.Br and *C. aurantiaca* (Rogers) Rupp, are morphologically very close, but still accepted as distinct species. Tony Bishop (Bishop 2000), in his notes section under *C. alata*, draws attention to several forms in this complex; one of which he describes and illustrates with a photo as *Caladenia* sp. affin. *alata* (Woronora Plateau, plate 312).

The following observations describe another similar form recently recorded at Tinnanbar, between Maryborough and Tin Can Bay, in south east Queensland. All measurements and comments refer to these Tinnanbar plants only.

Gary Brooks, who lives at Tinnanbar, has recorded several populations of *C. alata* at this locality and the late Ralph Crane also recorded plants on nearby Fraser Island (Crane 2000). The Tinnanbar plants of *C. alata* match the description of this species very well. Flowers are 10-16 mm across, and are mostly white with the usual bright carmine banding on the labellum and column. However, at times, the pointed segments can be suffused with pink, or rarely be a bright rosey pink. The two square-topped teeth (sometimes with a smaller one alongside) are present; one on each side at the base of the labellum midlobe. Midlobe and calli are bright orange.

During 2001, Gary noticed flowers of a small, nearly all white *Caladenia*, growing among some of the *C. alata* populations. At first he thought these were just an all white form of *C. alata*, but subsequent checking in 2002 and 2003, indicated they were actually closer to *C. aurantiaca*, despite growing and flowering sympatrically with *C. alata*. This determination was based on various published descriptions, the illustrations of W.H. Nicholls (Nicholls, 1969, plate 222), and the photos *C. aurantiaca* in Bishop (2000) and Backhouse and Jeanes (1995).

The plant habit of both species is similar, but *C.* affin. *aurantiaca* is usually shorter, with flowers that are always smaller; being 6-10 mm across, with slightly broader segments. Colour is always white, with mauve suffusions to the labellum lateral lobes, while the midlobe and calli range from pale lemon-yellow to orange. The shape and position of the calli is virtually identical in both species. The labellum midlobe is more pointed than that of *C. alata*, and the two rounded teeth, one on each side, are situated more or less at the junction of the mid and lateral lobes (or even on the margin of the lateral lobes), rather than distinctly on the midlobe as in *C. alata*.

The midlobe also has a nodule on each side towards the apex, which is present on all *C.* affin. *aurantiaca* flowers so far examined, but totally absent on *C. alata* flowers. The lateral sepals are always united for more than a quarter of their length; while those of *C. alata* are usually free, but when united it is for less than a quarter of their length.

There is no sign of the characteristic carmine banding (a feature of *C. alata*) on these flowers, and none have been observed that indicate hybridism with *C. alata*. Plants of both species are growing in grey sandy soil at sites that are well shaded, which keeps the substrate moister for longer than the adjacent wallum habitat.

While the morphological characteristics are similar between the two species, there is one biological characteristic that really separates them. The *C. alata* flowers remain open all the time for the life of the individual flower, but those of the *C.* affin. *aurantiaca* do not open until around 10.00am in the morning, and then close around 3.00pm in the afternoon; irrespective of weather conditions.

Inflated ovaries on both species indicate that pollination has been affected, but no insects of any kind have been observed on the flowers. Considering the brief period of time during the day that the *C.* affin. *aurantiaca* flowers are open for possible pollination, indicates that this species may be autogamous. Such a theory would explain the absence of any signs of hybridism.

There is no indication either, that the *C.* affin. *aurantiaca* plants may be the resulting hybrid between *C. alata* and either of the other two *Caladenia* species recorded at this locality. Both *C. carnea* R.Br, and *C. catenata* (Smith) Druce, have flowers that are larger or equal to those of *C. alata*, not considerably smaller.

However, the plants of *C.* affin. *aurantiaca* are not the only small Caladenia that Gary has recorded at Tinnanbar. Quite some time ago, during a season of above average rainfall, he found two diminutive plants, approximatly 70 mm high, growing in black peaty soil in the wallum habitat. Flowers were approximatly 5-6 mm across, with lilac coloured segments and dark reddish striations on the labellum. These plants were flowering in May; fairly early in the year for this genus. Subsequent searches of the same habitat, and similar habitats over the years, have failed to locate any more plants.

Acknowledgements.

I wish to thank Gary Brooks for his assistance with this species, and for comments on earlier drafts of this article.

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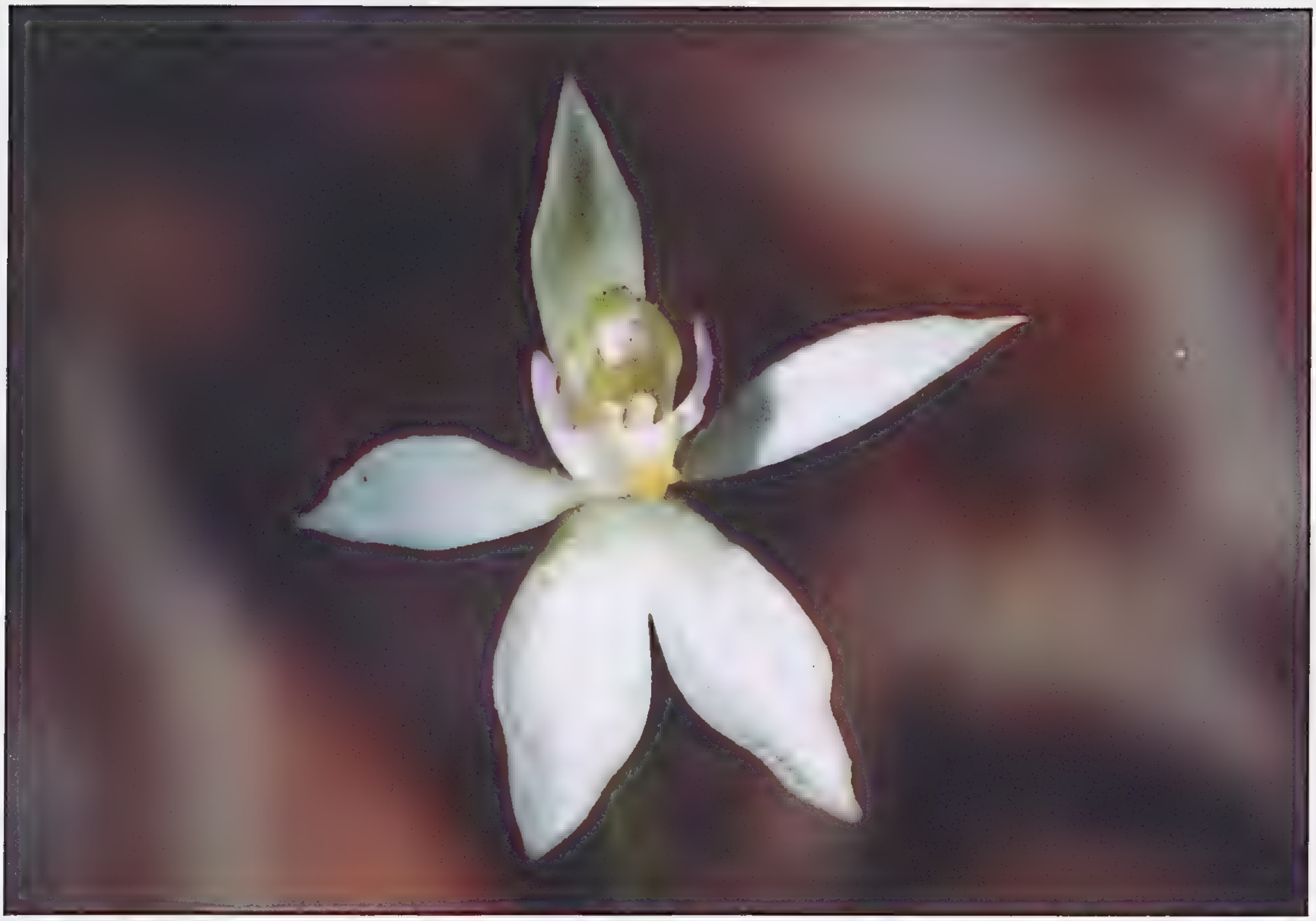
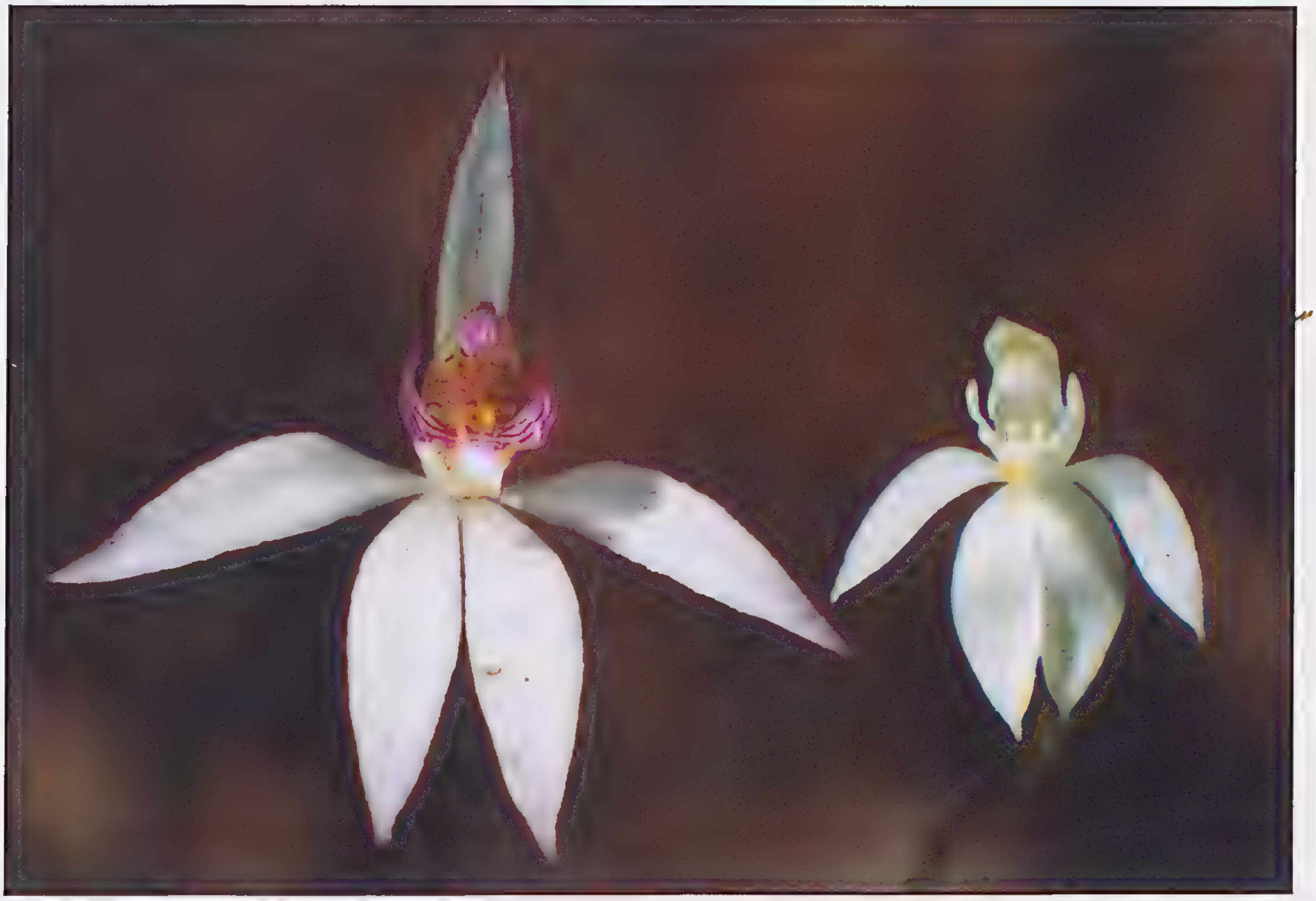


Caladenia sp. affin. *aurantiaca,* Wide Bay Region



Caladenia alata (left) and *Caladenia* sp. affin. *aurantiaca* (right)

Photos Alan Logan

Ira Butler Trophies for 2003

Roslyn Capell
Hon. Secretary, I.B.T.C.
P.O. Box 899, Willoughby, NSW, 2068

THE WINNER OF THE GOLD IRA BUTLER TROPHY - 2003
for the **Champion Australian Native Orchid Hybrid of the Year** is
***Sarcochilus* Yvette 'Jake's Pride' HCC-AD/OSCOV**

This stunning orchid, which is owned by Rosemary & George Ingram, was Champion Australian Native Orchid Hybrid at the OSCOV/Mornington Peninsula Orchid Society Summer Show in November 2002 where it received a Highly Commended Certificate from OSCOV. It was the OSCOV Victorian Australian Native Hybrid Orchid of the Year in 2002 and in 1999 OSCOV had given it an Award of Distinction. The flowers were red with a bright yellow labellum, and of good shape, well filled in.

Sarco. Yvette is *Sarco*. Cherie x *Sarco*. Fitzhart. The hybrid was made by Neville Roper, who registered it in 1998. The nomination form indicates that Ken Russell was also involved in the making of the hybrid.

Of the thirty six nominations this year, twenty seven from State or AOC or OSCOV Affiliated Societies, six were from ANOS groups, one from NOSSA, one from the Tinonee Open Day and Show, and one from the RHSV Royal Melbourne Show. During the year in which they became eligible, nominated plants had also received a total of three Awards of Merit, eleven Highly Commended Certificates, and one Award of Distinction. Again the overwhelming majority of entries were dendrobiums, with one *Dockrillia*, two *Sarcochilus*, and two terrestrials.

The following ten "runners up" will receive **Silver Ira Butler Trophies**:

- *Dendrobium* Avril's Gold 'Wingham' AM/AOC-NSW 2003; HCC/ANOS 2003 - Don Cruickshanks (hybridist: Ray Hill)
- *Dendrobium* X *gracillimum* 'Trish's Treasure' HCC-CC/OSCOV 2003 - David Wickham
- *Dendrobium* Jayden 'Goodie' AM/OSCOV 2003 - Philip Grech (hybridist: John Purvis)
- *Dendrobium* Lochiel 'Yellow Bird' HCC/OSCOV 2003 - Philip Grech (hybridist: John Purvis)
- *Dendrobium* Our Native 'Golden Glory' AM/ANOS 2003 - Fred Fear (hybridist: Ken Russell)
- *Dendrobium* Tie-Dye 'Genesis' HCC/AOC-NSW - Down Under Native Orchids (hybridist: D.U.N.O.)
- *Dendrobium* Victorian Blush 'Royal Show' - Australian Orchid Nursery (hybridist: Wayne Turville)
- Dendrobium (Zoom x Rutherford Blushing Bride) HCC/AOC-VOC - Michael Drobski (hybridist: D.U.N.O.)
- *Pterostylis* Rogoff 'Athol's Pride' HCC-ACC/AOC-QOS 2003; HCC-ACC/ANOS 1999 - Athol & Nancy Rosenberg (hybridist: Nesbitt Orchids)
- *Sarcochilus* First Light 'Butterscotch' - Down Under Native Orchids (hybridist: D.U.N.O.)

The following will receive **Ira Butler Certificates**:

- *Dendrobium* Anne's Rainbow Surprise 'Pirie 2' - Graham & Sue Zerbe
- *Dendrobium* (Autumn x Rutherford Sunburst) - Michael Hopwood
- *Dendrobium* Avril's Gold 'Brandon' AM/AOC-VOC 2002; HCC/OSCOV - Michael Drobski
- *Dendrobium* Avril's Gold 'Plenty' AM/AOC-NSW 2003 - Down Under Native Orchids
- *Dendrobium* Bruce Murray 'Sydenham' HCC/AOC-VOC - Michael Drobski
- *Dendrobium* Colonial Bullion 'Susan' - Alan & Doreen Garner
- *Dendrobium* X *delicatum* - G. & H. Taylor
- *Dendrobium* Duno Deerose 'Fiona' HCC/OSCOV 2003 - Ron & Pauline Coppin
- *Dendrobium* Fair Go - Ros & Tom Fitzgerald
- *Dendrobium* X *gracillimum* - John & Bev Gay
- *Dendrobium* (Hamilton x Elegant Heart) x *Den.* Aussie Victory - Kevin & Tess Simpson
- *Dendrobium* Hilda Poxon 'Carlingford' AM/AOC-NSW - Norm & Kay Mitchell
- *Dendrobium* (June Mac x Lawrose) 'Pink Delight' HCC/AOC-VOC 2003 - Michael Breuer
- *Dendrobium* Lochiel 'Golden Sunshine' - Philip Grech
- *Dendrobium* Rutherford Golden Sun - Janet & Tony Baumer
- *Dendrobium* Star One - Barry & Beattie Khann
- *Dendrobium* Salamaua HCC-AD/AOC-VOC - Michael Drobski
- *Dendrobium* (*speciosum* x Tarean) - Anita Evans
- *Dendrobium* X *suffusum* 'Doyle's River' - Down Under Native Orchids
- *Dendrobium* Tawhai 'Big Gem' - Norm & Kay Mitchell
- *Dendrobium* Tyabb 'Zoe' HCC/AOC-VOC - Michael Drobski
- *Dendrobium* Victorian Flare - Henk van den Berg
- *Dendrobium* Zip-Zap - Philip Grech
- *Dockrillia* X *grimesii* - Gary & Harleen Williams
- *Pterostylis* Ruckman - Nesbitt Orchids

THE WINNER OF THE BILL MURDOCH TROPHY - 2003

for the **Champion Australian Native Orchid Species of the Year** is
***Dendrobium speciosum* var. *speciosum* 'National White' x**
***D. speciosum* var. *curvicaule* 'Neils' Pick'**

This fine plant, owned by Mark Brown, was Grand Champion Orchid and Champion Epiphytic Species at the ANOS Warringah Group Spring Show. It was line bred by Neil Finch (Down Under Native Orchids). The flowers were light yellow in colour, shading to white towards the centre. The plant held two inflorescences, one carrying one hundred and forty two flowers and the other one hundred and twenty flowers, on inflorescences of 600 mm and 500 mm respectively. The flowers were of even size and well arranged on long pedicels.

The Committee was particularly impressed with two other nominations this year, and determined they were both worthy of **Certificates of Special Recognition**. They are ***Dendrobium kingianum* 'Chrystal Ice' HCC/AOC-VOC** owned by **Australian Orchid Nursery** and line bred by **Wayne Turville**, and ***Dendrobium speciosum* var. *grandiflorum* 'Jelita'** owned by **Bevan Burnham** and line bred by **Ted & Barbara Gregory (Merrellen Orchids)**.

There were twenty four nominations this year, of which four were known to be line bred, and nominated plants had also received a total of three Awards of Merit and four Highly Commenced Certificates. Sixteen nominations were from State or AOC or OSCOV Affiliated Societies, five were from ANOS groups, two from NOSSA, and two plants eligible by reason of having received quality awards. The vast majority of the nominated plants were Dendrobiums, with one *Sarcochilus*, one *Pterostylis*, and two Dockrillias.

The following will receive **Bill Murdoch Certificates:**

- *Dendrobium aemulum* - Alan & Doreen Garner
- *Dendrobium bigibbum* - Mr R. McQuiggin
- *Dendrobium falcorostrum* 'Joy' - Philip Grech
- *Dendrobium lithocola* - Graeme & Maureen Hazledine
- *Dendrobium jonesii* var. *magnificum* - Lorraine & Bill Dobson
- *Dendrobium kingianum* 'Kay's Pink' - Norm & Kay Mitchell
- *Dendrobium kingianum* 'Rose Ann' - Ros & Tom Fitzgerald
- *Dendrobium rex* 'Phena's Gold' - Down Under Native Orchids
- *Dendrobium speciosum* 'Armstrong' HCC/OSCOV - Barry & Beattie Khann
- *Dendrobium speciosum* 'Bomberland' AM-CC/OSCOV 2003; HCC-ACC/AOC 2003 - Stephen Stebbing
- *Dendrobium speciosum* 'John' HCC/OSCOV - Barry & Beattie Khann
- *Dendrobium speciosum* 'Karen' - Bevan Burnham
- *Dendrobium speciosum* var. *curvicaule* 'Le Eungell' - Cliff & Pat Schofield
- *Dendrobium speciosum* var. *speciosum* - Brendan Killen
- *Dendrobium speciosum* var. *speciosum* 'Julian' AM-CC/OSCOV 2003 - Murray Harding
- *Dendrobium speciosum* var. *speciosum* 'National White' x *D. speciosum* var. *curvicaule* 'North Star' - Lorraine & Bill Dobson
- *Dendrobium tetragonum* - Eric Bailey
- *Dockrillia striolata* 'Ruffles' AM/AOC-NSW - Down Under Native Orchids
- *Dockrillia teretifolia* - Bill & Ann Green
- *Pterostylis curta* 'Blunt' - Joy Lucas
- *Sarcochilus falcatus* - Graham Gray

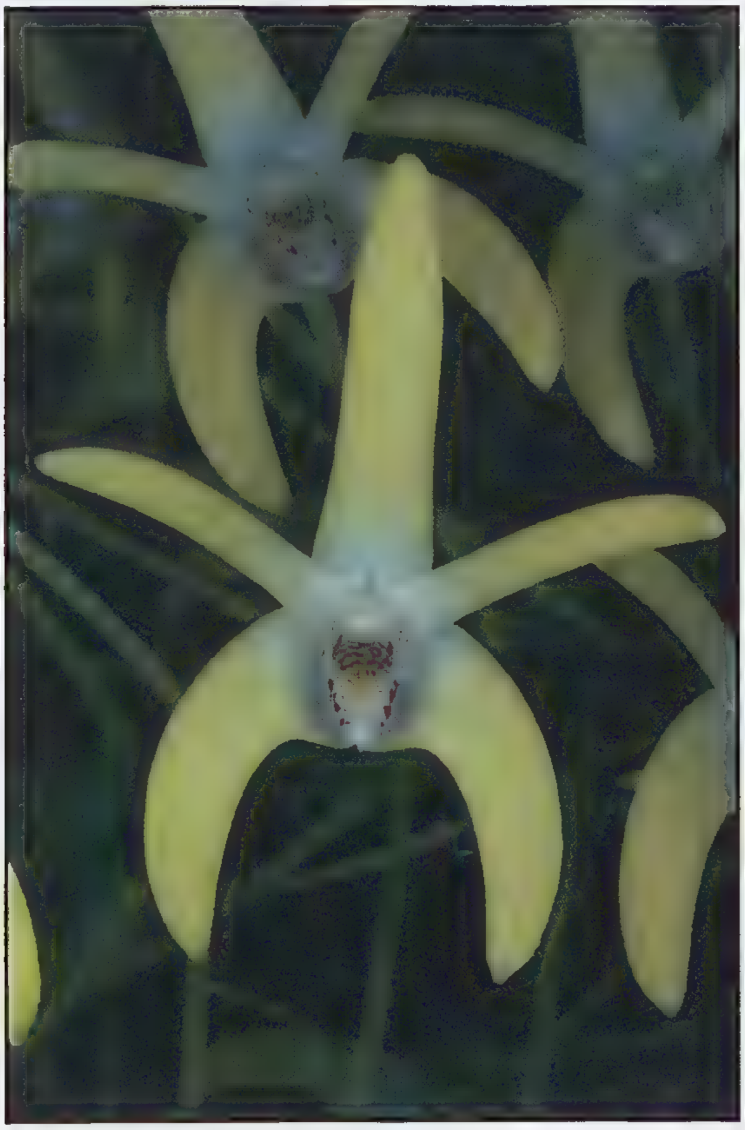
Congratulations to all this year's entrants, and best wishes for the new growing season.

Sarcochilus Yvette 'Jake's Pride' HCC-AD/OSCOV
Growers Rosemary and George Ingram

Photos George Ingram

Above and below left:
Dendrobium speciosum var. *speciosum* 'National White' x
Dendrobium speciosum var. *curvicaule* 'Neils' Pick'
Grower Mark Brown Photos David Titmuss

Below: *Dendrobium speciosum* var. *grandiflorum* 'Jelita'
Photo Bevan Burnham



Orchids of the Paluma and Crystal Creek area.

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The Paluma area.

Paluma is a small village situated at about 900 m altitude on the crest of the Paluma Range about 60 km north of Townsville. The area is often better known as "Mt Spec" which is actually the highest point at 995 m and situated a few kilometres north of the township. Only a handful of people live permanently at Paluma, but there are several holiday homes mostly owned by Townsville people seeking a mountain retreat from the coastal heat and humidity. To many orchid fanciers in Australia the name immediately brings to mind the Mt Spec orchid, *P. amabilis* or *Phalaenopsis rosenstromii* if you prefer, but this most beautiful of orchids does not grow on Mt Spec, it grows in the lowland gorges at the base of the Paluma Range, some 800 m lower.

The following is a summary of a report on the orchids of the area originally done for the Queensland National Parks and Wildlife Service. The study area covers a strip running from the narrow coastal plain over the Paluma Range to the drier western slopes near Hidden Valley. The southern boundary is in the latitude of Rollingstone Creek and Mt Halifax in the north by Waterview Creek and Jourama Falls. Altitudes range from sea level to 1063 m at Mt Halifax, 1031 m at Mt Zero and 995 m at Mt Spec with most of the area being above 500 m and a considerable area above 800 m altitude. The eastern escarpment rises steeply from a narrow coastal plain and gives rise to several fast flowing streams including Rollingstone Creek, Ollera Creek, Crystal Creek, Waterfall Creek and Waterview Creek, the larger of which flow most of the time, but may be dry in years when the rainfall is low. The western parts of the study area are drained by the tributaries of Running River which ultimately drain into the Burdekin River.

The vegetation types of the coastal lowlands include mangroves and saltpans, gallery rainforests along the major streams, eucalypt forests of the coastal plains and melaleuca woodlands. On the mountains there are large areas of rainforest along the crest of the range and for a few kilometres inland. As the rainfall decreases to the west, the rainforest gives way to a narrow band of tall open forest dominated in some areas by flooded gum and in other areas by casuarina forests. Further west in drier country there are extensive areas of lower grassy open eucalypt forest.

The major use over most of the open forests is grazing, but cattle numbers are relatively low as most of the area is very rugged. There have been selective logging operations over much of the rainforest and tall open forest, but this virtually ceased with the declaration of the World Heritage Area in 1988. A limited amount may still occur on private land in the area. Some small scale mining operations for tin and gold were operated over the last one hundred years, but little or none is currently active. In summary little broad scale clearing has occurred and the vegetation of much of the study area is little changed from that existing one hundred years ago.

Significance of the Crystal Creek-Paluma orchids

The orchids of the Crystal Creek-Paluma area represent a good sample of the orchid flora of the southern part of the Wet Tropics area. Similar orchids occur over a broad area extending north to areas such as the Kirrama area and the Kennedy Range Road, south to the Bluewater area and Mt Elliot. The southern orchid flora is in reality just a subset of that of the whole area with a few northern species not represented. It is a rich and diverse orchid flora, more so than most other areas in Australia. It includes three major elements: the epiphytes and terrestrials of the rainforests, the epiphytes and wet season flowering terrestrials of the coastal melaleuca forests and the dry season flowering terrestrials of the upland woodlands.

One important aspect of the study area is its accessibility. Access to the upland rainforests of the southern part of the Wet Tropics is very limited with only four roads open to the public crossing the coastal ranges in the area between Townsville and Tully, a distance of 250 km. The Paluma Range road which is sealed to Paluma Township, offers access to visitors from Townsville and Ingham as well as to tourists using the Bruce Highway. Visitor infrastructure such as sealed roads and walking tracks, make the orchids available to visitors interested in the natural history of the area. These visitors include tourists both Australian and international, students and researchers from James Cook University and students at the Education Department's Paluma Field Studies centre. It could be argued that drawing attention to the orchids of the area might well result in some additional impact from illegal collectors, but this would have only a local effect and would be unimportant in overall conservation terms. The major effect of pilfering orchids along walking tracks and roads is that it makes it much more difficult for visitors to see the plants. As many of the orchids are seasonal or small or grow high up in trees, the best way to interpret them to tourists may be as part of an interpretive display at Paluma.

Conservation of Crystal Creek-Paluma orchids

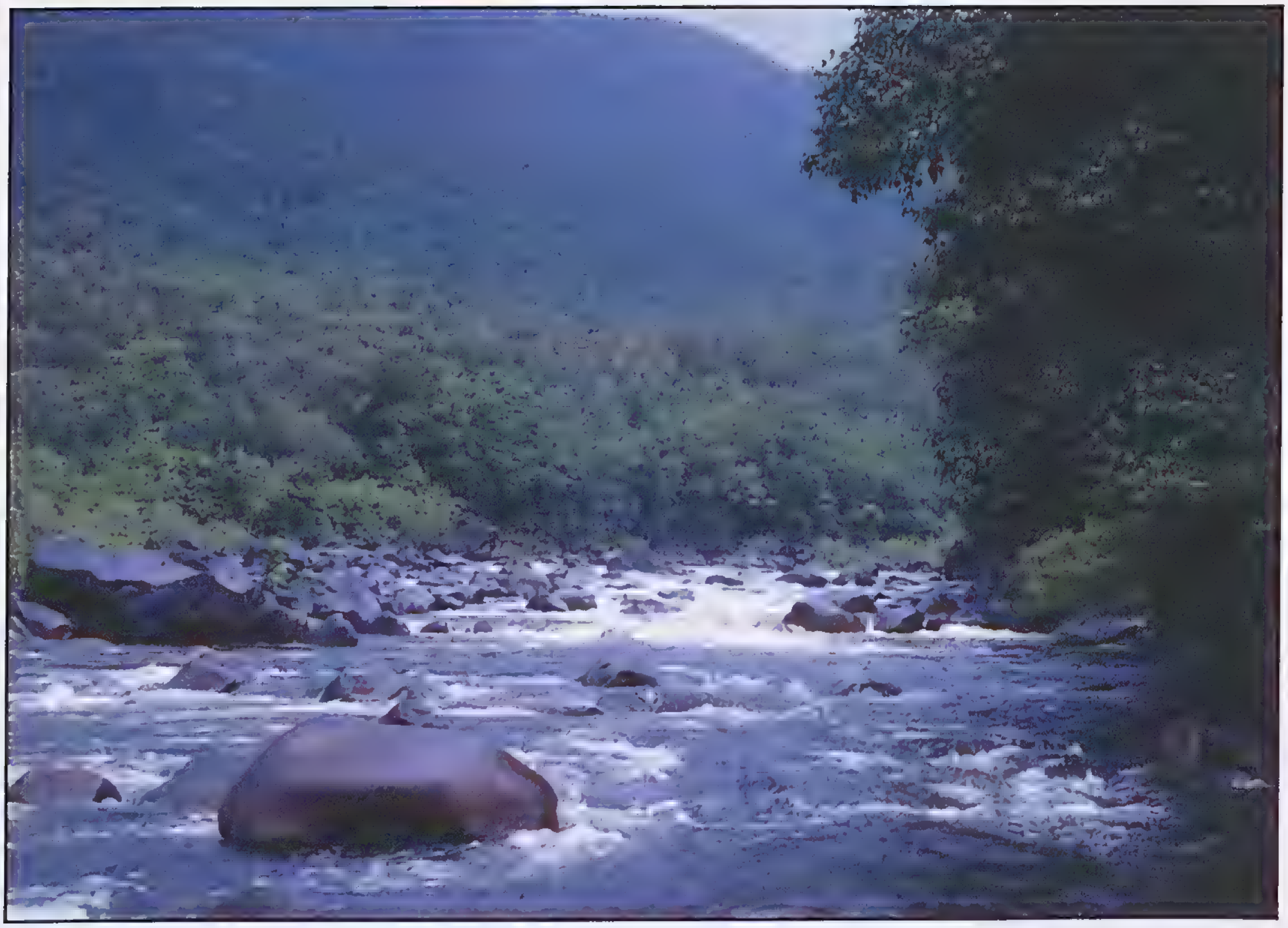
The study area features the Paluma Range National Park and state forests which serve to protect a sample of most habitats. Part of the study area has additional protection as it is included in the Wet Tropics World Heritage Area. Consequently rainforests, tall open forests and the orchids that grow in them, are well protected. Some of the coastal vegetation types have less protection and could be cleared in the future. Much of the upland open forests west of the rainforests are not protected, but the rugged nature of the country is likely to result in little clearing. The Mt Zero property on the south western corner of the study area has been purchased by the Australian Nature Conservancy and as a privately-owned reserve, will remain in its current uncleared state as a sample of the transitional country between the rainforests and the drier interior.

As a result of the declaration of the World Heritage Area in 1988 virtually all logging ceased in the rainforest and tall open forest. This is generally a good thing as far as orchid conservation is concerned, but there are down-sides to it. As a result of the cessation of logging operations there is now less management presence in the World Heritage Area and therefor less likelihood of orchid poachers being caught. Perhaps more importantly the removal of commercial logging could result in less incentive for intensive fire management in open forests, possibly resulting in a changed fire regime and subsequent changes to the mix of vegetation types. This can be detrimental to orchids and many other organisms. It is important that fire is managed in such a way that the tall open forests on the western margin of the rainforests are maintained. Exclusion of fire from these forests could result in rainforests replacing them, resulting in an impact on several species, particularly on the vulnerable *Dendrobium fellowsii* which is restricted to this type.

Of the species listed below only *Phaius tancarvilleae* (endangered), *Phalaenopsis amabilis* (endangered) and *Dendrobium fellowsii* (vulnerable) are regarded as being rare or threatened.

Conservation actions

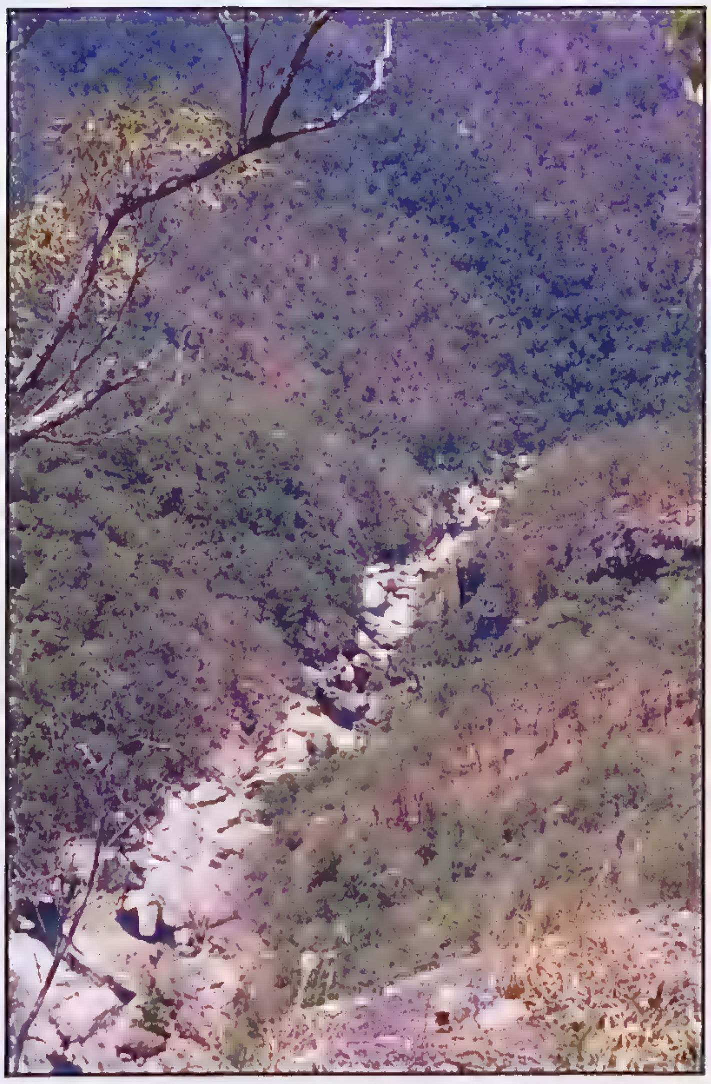
- The provisions of the *Nature Conservation Act 1992* and the associated legislation such as the *Nature Conservation (Protected Plants) Conservation Plan 2000* should continue to be enforced. This should include continual patrols of the area and surveillance of markets and other places where illegally collected plants are offered for sale.
- Ecological management of habitats should continue. The major thrust of this should be to ensure that significant non-natural changes in the composition and distribution of plant communities does not occur. The most important issue in this is management of fire with the aim of maintaining the existing diversity of habitats.
- Public education concerning collecting of plants from the wild should be increased. This could involve, among other things, education of students at the field studies centre on this matter.



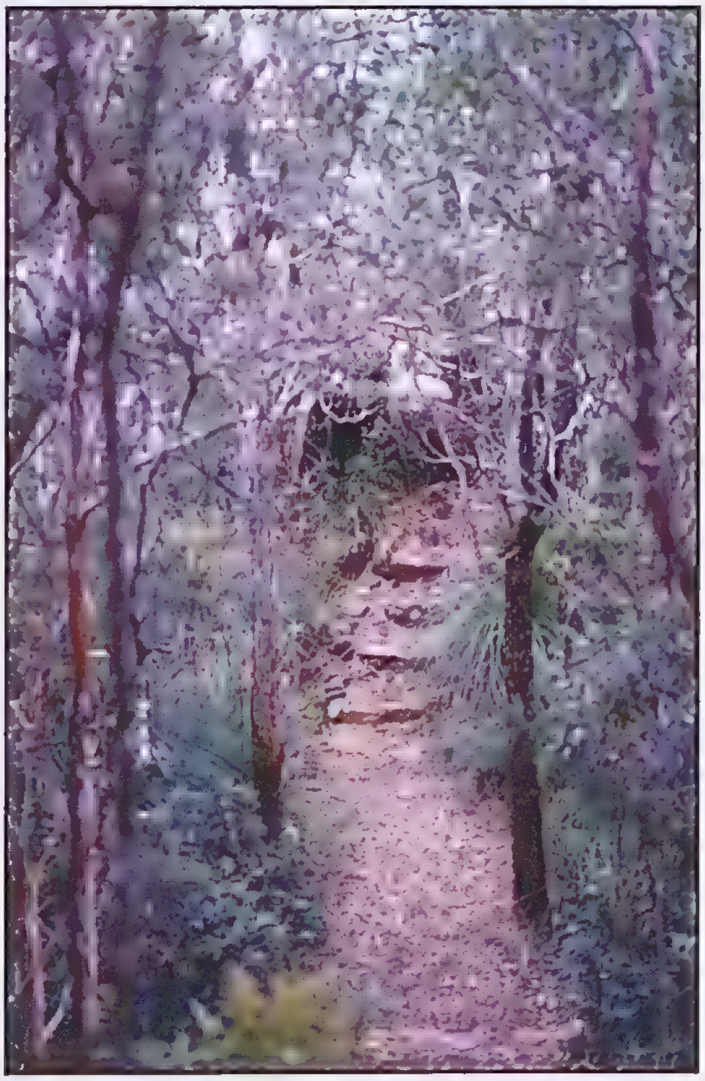
Big Crystal Creek in the coastal lowlands.

Paluma Range from the coastal lowlands.

Oak forests at higher altitudes.



View from the top of Jourana Falls.



Walking track near Witt's Lookout.

A note on nomenclature

Recent times have seen an upheaval in orchid nomenclature, particularly at the level of the genus. A prime example is the large genus *Dendrobium* where there is a proposal to split the genus into more than forty new or re-instated genera, with the result that none of the species from the study area would be included in the new genus *Dendrobium.* It seems unlikely that the changes will be accepted internationally in the near future and until such time as this occurs, it is proposed to use the familiar names in this list. For the sake of consistency this will include the non-recognition here of the name "*Dockrillia*" for the so-called pencil orchids, a name that has gained some recognition in Australia, but is not being used in international circles. Similarly the new generic names proposed for *Pterostylis* and *Corybas* are not used here.

Reliability of records

A list of specimens in Queensland Herbarium from the study area has been used in compiling this list, but the majority of the species are listed on the basis of records in notebooks and memories of the author and John Nuss, a local native orchid expert. Many of the species listed are well known and while there may be no specimens to back them up, there is no doubt about their occurrence in the study area. In these and other cases, the records have been accepted as reliable and are included, but it would be advantageous to have a specimen lodged in Queensland Herbarium. Five other records – *Habenaria hymenophylla*, *Dendrobium aemulum, Phaius tancarvilleae*, *Microtis* sp. and *Genoplesium* sp. reported by Ray Robinson but without specimens, have also been accepted. In the case of *Microtis*, *Genoplesium, Corybas* and *Arthrochilus* the identity of the species remains uncertain, although some informed guesses are made. The list should be regarded as preliminary and it is almost certain that some species will be added in the future.

List of orchids

Acianthus borealis D.L. Jones

This small terrestrial species was formerly considered to be a form of the widespread southern species *A. fornicatus*. It can be distinguished by its smaller flowers and other floral features. It grows on well-drained sites often on hillsides in tall open forest and oak forest to the west of Paluma. Flowering is in autumn. Leaves have been seen near rocks beside Paluma-Hidden Valley Road. Plants of this species were collected with unopened flowers, near Mt Zero in late May 2003.

Anoectochilus yatesae F.M. Bailey

This small terrestrial species belongs to the group known as jewel orchids and grows in dense shade in rainforests often beside small watercourses, in leaf litter on the forest floor or on large rocks, mostly above about 500 m altitude. Flowering is in winter and spring. It has been recorded at Twin Falls on the road to Paluma at about 800 m altitude.

Arthrochilus sp

Leaves of an *Arthrochilus* species have been seen in open forests west of Paluma. The identity of this will remain uncertain until flowering material is obtained. There are two main possibilities, A. *oreophilus* or *A. stenophyllus.* The plants seen appeared to resemble *A. oreophilus* more closely and it is recorded as being a species of the mountains that flowers before the wet season, while *A. stenophyllus* is generally a lowland species and flowers in the wet season.

Bulbophyllum baileyi F. Muell.

This species has by far the largest plants and flowers of any *Bulbophyllum* occurring at Paluma. It is predominantly a lowland species from sea level to about 800 m. It has been reported from several creeks including Waterfall Creek and Little Crystal Creek, growing as an epiphyte or on rocks in shade or in full sun forming strands or dense mats. Flowering can occur at any time, but is more likely in late spring and summer.

Bulbophyllum evasum T.E. Hunt & Rupp

This plant consists of small creeping, very brittle rhizomes with small well-separated pseudobulbs. The tiny flowers are borne in a distinctive dense head about 1 cm across.

This is a species of the high cloud forests on the edge of the ranges at about 800 m to 1100 m altitude. It grows on rocks or trees in shaded positions, often low down among mosses and other epiphytes. Plants are quite common in some areas such as Witt's Lookout and Ethel Creek.

Bulbophyllum johnsonii T.E. Hunt & Rupp
This is a common species in rainforests between Townsville and Cooktown at altitudes from near sea level to 1200 m, but more abundant at the higher end of the range. Flowering can occur at any time and the flowers last only a few days. Plants have been seen at Witt's Lookout, Birthday Falls and several other locations, growing on rocks and trees in areas of good air movement and bright light.

Bulbophyllum macphersonii Rupp
Synonyms: *Bulbophyllum purpurascens* F.M. Bailey; *Osyricera purpurascens* (F.M. Bailey) Deane
This is a miniature species that grows on tree trunks or twigs in rainforests in many localities at Paluma. It is a widespread species recorded from about Rockhampton to Cooktown, at higher altitudes. Flowering can occur at any time, with an emphasis on autumn. It is closely related to *B. sladeanum* (which is also known as *B. macphersonii* var. *spathulatum*) a species from rainforests a little further north. This is a well known species, reliably reported on many occasions from Paluma.

Bulbophyllum newportii (F.M. Bailey) Rolfe
Synonyms: *Sarcochilus newportii* F.M. Bailey; *Bulbophyllum exiguum* F. Muell. var. *dallachyi* Benth.; *Bulbophyllum wilkianum* T.E. Hunt; *Bulbophyllum wanjurum* T.E. Hunt
An abundant species in high altitude rainforests at Paluma, eg at Twin Falls, Witt's Lookout and Birthday Creek Falls. It forms strands or mats on branches or on boulders, often in areas where there is good air movement. It occurs from Eungella to Cooktown. Flowering is mostly in spring. Some authorities propose the recognition of *B. wilkianum* as a separate species (M.A. Clements *Australian Orchid Research* 1: 18,19 1989), however here I prefer to follow Dockrill in treating the two as synonymous. If Clements were followed the species at Paluma would probably be identified as *B. wilkianum*.

Bulbophyllum radicans F.M. Bailey
Synonyms: *Bulbophyllum cilioglossum* R. Rogers & Nicholls
This pendulous species occurs from Rockhampton to about Cooktown from sea level to 1000 m altitude. It grows in shaded conditions in rainforests on trees or occasionally on rocks. Flowering occurs at any time of the year. It has been reported at Twin Falls, Ethel creek and Witt's Lookout.

Calanthe triplicata (Willemet) Ames
Common name: Christmas orchid
Synonyms: many synonyms exist for this widespread species, but the only one that is relevant here is *Calanthe veratrifolia* (Willd.) R.Br.
This is a robust terrestrial species from rainforests at higher altitudes in north Queensland, and at lower altitudes in southern areas. It occurs from the Illawarra District in NSW to Cape York Peninsula and New Guinea to South East Asia as far west as India and north to southern China. At Paluma it can be seen growing in shady positions on the rainforest floor along the walking track to Witt's Lookout. The spectacular flowers appear in December, giving rise to the popular name, Christmas orchid. It now takes a little searching to find plants near the walking tracks as misguided visitors have stolen many, but it remains in good numbers in more remote parts of the rainforests.

Caladenia carnea R.Br
Common name: pink fingers
This is a widespread species occurring from South Australia to North Queensland. It occurs in open forests west of the rainforests at Paluma, ranging from the tall open forests and oak forests to the drier woodlands almost as far west as Hidden Valley. Flowering is in spring and the flowers last a few weeks. A few years ago these plants were identified erroneously as *C. catenata*. A new species very closely related to *C. carnea* has been described from north of the Daintree (*C. chamaephylla*), while *C. fuscata* (synonym *C. carnea* var. *fuscata* Rchb.f.) is another closely related species from south Queensland as far north as Eungella. It is generally described as being smaller than *C. carnea* with a narrow labellum, and with pronounced forward protruding lateral lobes embracing the small column and a small deflexed acute mid-lobe. Which species is present at Paluma remains to be clarified, it is possible that the plants in the drier country are *C. fuscata* and those in the moister tall open forests are *C. carnea*. It is my experience that those in the drier

country have smaller flowers than those in the tall open forests. Added to this confusion is the fact that some orchid authorities are not accepting many of the new species that are based on very small differences and prefer to retain *C. carnea* as an inclusive, widely defined species.

Chiloglottis longiclavata D.L.Jones
This species occurs in the mountains from about Cooktown to the Blackdown Tableland (west of Rockhampton). It grows in open forests in shady, sheltered situations from about 400m to 900 m altitude. Flowering is from April to June. It can be recognised by the pair of leaves which are present at flowering. Leaves have been reported from open forests west of Paluma, but flowering specimens are needed to remove any doubts. It was previously identified as *Chiloglottis reflexa*, which is now not considered to occur in Queensland and as *C. diphylla*, a similar species which is now considered to be restricted to southern Queensland and NSW.

Corybas barbarae D.L. Jones
This species grows in sheltered sites in open forest such as on sheltered hillsides in leaf litter and close to creeks, always in deep shade. It occurs in the mountains above about 500 m altitude. Flowering is from May to July. It is easily distinguished from *Corybas cerasinus* when in flower by the white dorsal sepal as opposed to a purple one in *C. cerasinus*. D.L. Jones, in the description of this species, lists one of the specimens examined as coming from "Mt Spec" collected by Abell in June 1955. No other records are known to date.

Corybas cerasinus D.L. Jones & B. Gray
This species grows in large colonies in the leaf litter under open forests in sheltered shady places. Flowering is March to July, but often only a small minority of plants are in flower. Leaves have been seen in the vicinity of Hermit Creek near Paluma Dam. The identification of this species is tentative until a flowering specimen is obtained. However the leaves seen were identical with positively identified flowering specimens from Wallaman Falls to the north of the study area. The plants are extremely small and very easily overlooked. It was formerly thought to be *Corybas neocaledonicus*, until described as a new species in 2001.

Corymborkis veratrifolia (Reinw.) Blume
Common name: Cinnamon orchid
Synonyms: This is a widespread species with many synonyms. The only one relevant here is *Corymbis veratrifolia* (Reinw.) Rchb.f.
This species occurs at low to moderate altitude in shady sheltered rainforest conditions, often in alluvial soil near streams. The plants are sometimes mistaken for young palm trees. Flowering is in the wet season from November to March. The only record to date is from Pappins Rd, just to the west of Jourama Falls, but lowland forests along Crystal Creek and similar situations are possible habitats.

Cryptostylis subulata (Labill.) Rchb.f.
This species has been recorded from a creek a few kilometres west of Paluma in dry open forest habitat. The plants grow in low dense creek bank vegetation close to the water. Flowering is reported as being from August to April, but the Paluma plants have flowered in cultivation in December to February. While there are only a few records in north Queensland, this is a widespread species along the eastern Australian coast to Tasmania and South Australia.

Cymbidium canaliculatum R.Br.
Synonyms: *Cymbidium sparkesii* Rendle; *Cymbidium hillii* F. Muell.
This is a widely distributed species, occurring across the top of Australia and down the east coast and adjacent inland to northern NSW. It occurs in drier coastal areas and in the semi-arid inland, growing on eucalypts in bright sunny conditions, usually in a dead limb where the roots can gain some protection from the hot sun. Flowering is during late spring. In the study area it occurs occasionally in open forests on the coast, but is more common in the drier open forests between Paluma and Hidden Valley. Reported from Ollera Ck, lower Cloudy Ck and from west of Paluma.

Cymbidium madidum Lindl.
Synonyms: *Cymbidium iridifolium* Cunn.; *Cymbidium leroyi* St Cloud; *Cymbidium albuciflorum* F. Muell.
This species grows on trees or rocks, or occasionally in the ground from low altitudes to the mountains in moister open forests and

rain forests. At Paluma it is quite common in oak forests on the margins of the rainforests. It grows equally well in bright and in shady conditions. Inflorescences on plants in shady conditions are usually longer than those in bright sunlight. Plants with many large green seed pods are often seen. Flowering is in spring.

Cymbidium suave R.Br.
Common name: Snake orchid
Synonyms: *Cymbidium gomphocarpum* Fitzg.
This species is easily identified by the long stems that have given rise to the common name of Snake orchid. It occurs from sea level to the mountains and has been reported from eucalypt forests west of Paluma, growing in moister open forests on dead tree limbs, where the roots can penetrate deep into rotting wood. Flowering is in spring, August to October. Reported from open forests west of Paluma, Jourama Falls and Ollera Creek.

Dendrobium adae F.M. Bailey
Synonyms: *Dendrobium palmerstoniae* Schltr.; *Dendrobium ancorarium* Rupp; *Thelychiton adae* (F.M. Bailey) M.A. Clem. & D.L. Jones
This is a common epiphyte in the mountain rainforests at Paluma, often growing and flowering low down on trunks or on rocks in shady conditions. Flowering occurs from July to September.

Dendrobium aemulum R.Br.
There are two forms recorded from north Queensland, the one from the study area has stumpy pseudobulbs and is often known as the ironbark form, rather than the long slender brush box form from the Atherton Tableland. It grows usually on ironbarks in open forests west of the rainforests. Flowering is in early spring, August to October. The only reports from the study area are from the vicinity of Running River where plants have been reported by Ray Robinson, but no specimens exist in herbaria. This record needs confirmation but, as the species occurs to the south at Eungella and to the north on the Atherton Tableland, it is quite reasonable to expect it here.

Dendrobium agrostophyllum F. Muell.
Common name: Buttercup orchid
Synonyms: *Dendrobium muellerianum* Schltr.
This very attractive species is a common sight in the mountain top rainforests and oak forests. It tolerates strong sunlight and shade equally, but often grows best where there is air movement such as along the crest of the range, near waterfalls and in open oak forests. While the stems can grow to 60 cm long, small plants only a few centimeters long will flower. Flowering is in August to September.

Dendrobium baileyi F. Muell.
Synonyms: *Dendrobium keffordii* F.M. Bailey; *Grastidium baileyi* (F.M. Bailey) Rauschert.
This epiphytic species occurs mostly below 800 m altitude in rainforests, often along creeks and in mangroves. It has been reported once from Waterfall Creek at about 200 m altitude. Flowering can occur at any time throughout the year, but is more common in the wet season between November and March.

Dendrobium canaliculatum R.Br.
Common name: Tea tree orchid, onion orchid
Synonyms: *Dendrobium tattonianum* Bateman ex Rchb.f.: *Dendrobium canaliculatum* R. Br. var. *tattonianum* (Bateman ex Rchb.f.) Rchb.f.: *Cepobaculum tattonianum* (Bateman ex Rchb.f.) M.A. Clem. & D.L. Jones.
This is a familiar species in the coastal paperbark (*Melaleuca viridiflora*) forests and woodlands. It is almost restricted to the paperbarks, but occasionally grows on other species in open forests, growing above the levels to which the regular fires reach. It has not been reported from the open forests west of Paluma, but an occurrence there is possible. Flowering is from July to November. This is a common, well known species on the coastal strip in the study area. There has been a recent proposal to re-instate the name *Dendrobium tattonianum*, for plants from this area, with forms from Cooktown north being considered the true *Dendrobium canaliculatum*. However the differences are superficial, relating to colour and the familiar name is preferred here.

Dendrobium discolor Lindl.
Common name: Golden orchid
Synonyms: *Dendrobium undulatum* R.Br.; *Dendrobium arachnanthe* Kraenzl.; *Dendrobium elobatum* Rupp; *Durabaculum undulatum* (R.Br.) M.A. Clem & D.L. Jones.

This is a well known species of the lowlands, although plants are occasionally reported from up to about 800 m altitude. It is a large plant that usually grows in exposed positions such as rockfaces, rainforest margins and mangroves. The stems produce aerial growths which serve to propagate the plant when they become detached. Flowering is from July to October.

Dendrobium fellowsii F. Muell.
Synonyms: *Dendrobium bairdianum* F.M. Bailey; *Dendrobium giddinsii* F.M. Bailey; *Eleutheroglossum fellowsii* (F. Muell.) M.A. Clem. & D.L. Jones
This species grows on eucalypts with a rough bark such as bloodwoods, or on casuarina trees in moist open forest often not far from rainforests, at moderate to high altitudes, usually above 700 m. It grows in the upper branches out of reach of fires and for this reason is seldom seen. Flowering is from October to January and a plant will often flower twice in this period. It is notoriously difficult to grow in cultivation and plants should not be removed from their habitat. This species was previously well known under its synonym, *D. bairdianum.*

Dendrobium gracilicaule F. Muell.
Synonyms: *Dendrobium elongatum* Cunn.; *Dendrobium brisbanense* Rchb.f.; *Dendrobium macropus* (Endl.) Rchb.f. ex Lindl. spp. *gracilicaule* (F. Muell.) P. Green; *Thelychiton gracilicaulis* (F. Muell.) M.A. Clem. & D.L. Jones
This is a common species from northern NSW to about Cooktown. In north Queensland it is restricted to altitudes above 800 m, growing on trees or rocks in rainforests or moist open forests. At Paluma it is much less common than the similar *Dendrobium adae.* Flowering is from July to October. Also reported from Jourama Falls.

Dendrobium jonesii Rendle
Synonyms: *Dendrobium fusiforme* F.M. Bailey; *Dendrobium ruppianum* A. Hawkes; *Thelychiton jonesii* (Rendle) M.A. Clem. & D.L. Jones
While this species is occasionally seen at low altitudes, it is most abundant higher up. It grows on trees or rocks in rainforest and in moist open forests where it often occurs on casuarina trees. It favours bright light in tree tops and on rocks near waterfalls and open creek areas. It flowers from August to October, but individual plants last only about a week or two in flower.

Dendrobium lichenastrum (F. Muell.) Kraenzl.
Synonyms: *Bulbophyllum lichenastrum* F. Muell.; *Dockrillia lichenastra* (F. Muell.) Brieger; *Davejonesia lichenastra* (F. Muell.) M.A. Clem.
This species is relatively common in upland areas north of Mackay and south of Cooktown. It grows in rainforests or moist open forests above about 400 m altitude as an epiphyte or on rock faces forming a dense mat. Flowering can occur at any time, but is most common in spring. It has been reported at Paluma, Waterfall Creek, Jourama Falls and Little Crystal Creek. There remains some debate concerning the relationship of this species to *Dendrobium prenticei*, which has very similar flowers, but has elongate terete leaves up to 4 cm long. Dockrill considers them to belong to the same species, but the split into two species seems to have been commonly accepted.

Dendrobium linguiforme Sw. var. ***nugentii*** F.M. Bailey
Synonyms: *Dendrobium nugentii* F.M. Bailey; *Dockrillia nugentii* (F.M. Bailey) M.A. Clem. & D.L. Jones
This species occurs in many areas of north Queensland, mostly in the mountains and on the tablelands and extends some distance inland in some areas. It usually grows in areas of bright light on tree limbs in open forests or rainforests and on exposed rocks. Flowering is winter to spring. It has been recorded from Ollera Creek, but it is likely to be more widespread. Some authorities regard this as a species *Dendrobium nugentii.* It is a borderline case and here the option of considering it a variety is preferred.

Dendrobium monophyllum F. Muell.
Common name: Lily of the valley orchid
Synonyms: *Dendrobium tortile* Cunn.; *Australorchis monophylla* (F. Muell.) Brieger
This species occurs above 500 m altitude in the tropics, usually in drier rainforests and moister open forests. It usually grows in strong light and may form large clumps, or

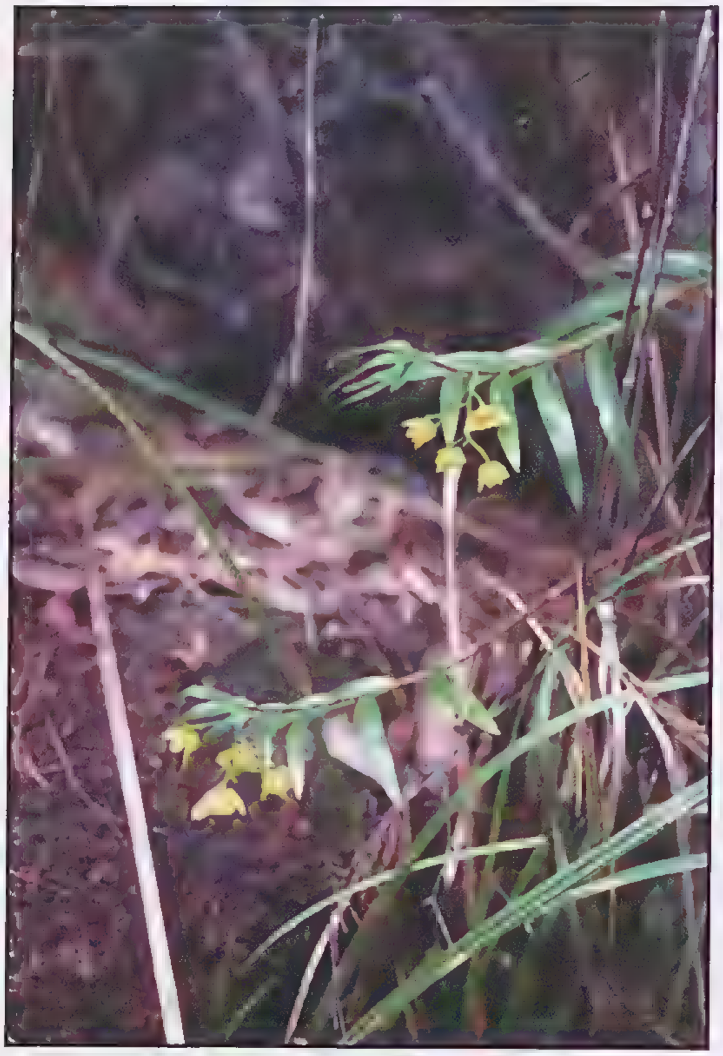
alternatively may form long strands over rocks or tree trunks. Flowering is spasmodic, but most common in spring. Recorded at Pappins Rd, which is just to the west of Jourama Falls. It could well be present in the moister open forests between Paluma and Hidden Valley.

Dendrobium racemosum (Nicholls) Clemesha & Dockrill
Synonyms: *Dendrobium beckleri* F. Muell. var. *racemosum* Nicholls; *Dockrillia racemosa* (Nicholls) Rauschert
The best known habitat of this species is the Atherton Tableland where it grows in rainforest or sometimes on street trees. It is predominantly a species of high altitudes, above 800 m, but has been reported from lower areas as well. In the study area it has been reported from gallery forest along Waterfall Creek and at Jourama Falls at low to moderate altitude. It has not yet been reported from the upland rainforests, but its presence there remains a possibility.

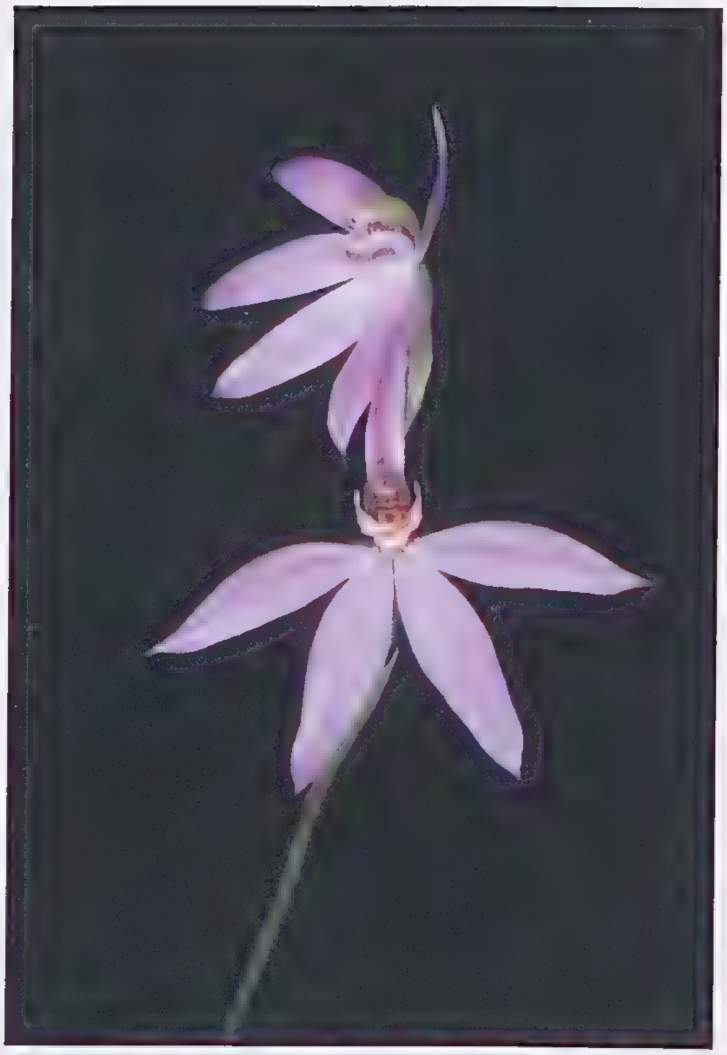
Dendrobium speciosum Smith var. ***curvicaule*** F.M. Bailey
Common name: King orchid
Synonyms: *Dendrobium curvicaule* (F.M. Bailey) M.A. Clem. & D.L. Jones; *Thelychiton curvicaulis* (F.M. Bail.) M.A. Clem. & D.L. Jones
This variety occurs throughout the coastal tropical region from Mackay to Cooktown. It grows from sea level to the mountains, but is most abundant above 500 m altitude in the study area. It grows most commonly on rocks in areas where it receives bright light in rainforest or moist open forests. Flowering is in late winter and spring. It is a common and well known species reported at many places including Witt's Lookout, Hermit Creek and between Paluma and Hidden Valley. It is similar to *Dendrobium jonesii*, with the two often growing together. Some authorities regard this as a species *Dendrobium curvicaule*, but here it is treated as a variety of the widespread species *D. speciosum*. This choice is made here because the similarities which bind the varieties together are considered to be more important than the differences that separate them.

Dendrobium teretifolium R.Br. var. ***fasciculatum*** Rupp
Synonyms: *Dendrobium teretifolium* R.Br. var. *album* C. White; *Dockrillia calamiformis* (Lodd.) M.A. Clem. & D.L. Jones; *Dendrobium calamiforme* Lodd; *Dendrobium baseyanum* St Cloud; *Dockrillia baseyana* (St Cloud) Rauschert
This variety occurs from sea level to the mountains, growing on trees or rocks in rainforests and in open forests. Flowering is August to November. There have been several sightings of this species in lowland creeks including Ollera Ck, Little Crystal Ck and Waterview Ck. There is much debate currently in Australia concerning recognition of the name *Dockrillia* for the pencil orchids. This name is part of a revision of the genus *Dendrobium* into about forty new or re-instated genera. While the name *Dockrillia* is being used in Australia by some authorities, it and the other associated names have not been accepted overseas and for the present, the old conservative nomenclature is retained here. *D. teretifolium* var. *album* is cited in *Catalogue of Australian Orchidaceae* as a synonym *of D. dolichophyllum* (*D. teretifolium* var. *aureum*) and the type is from Mt Spec, however other authorities consider var. *album* to be a synonym of *D. teretifolium* var. *fasciculatum*. To date plants referrable to var. *aureum* have not been reported in the study area.

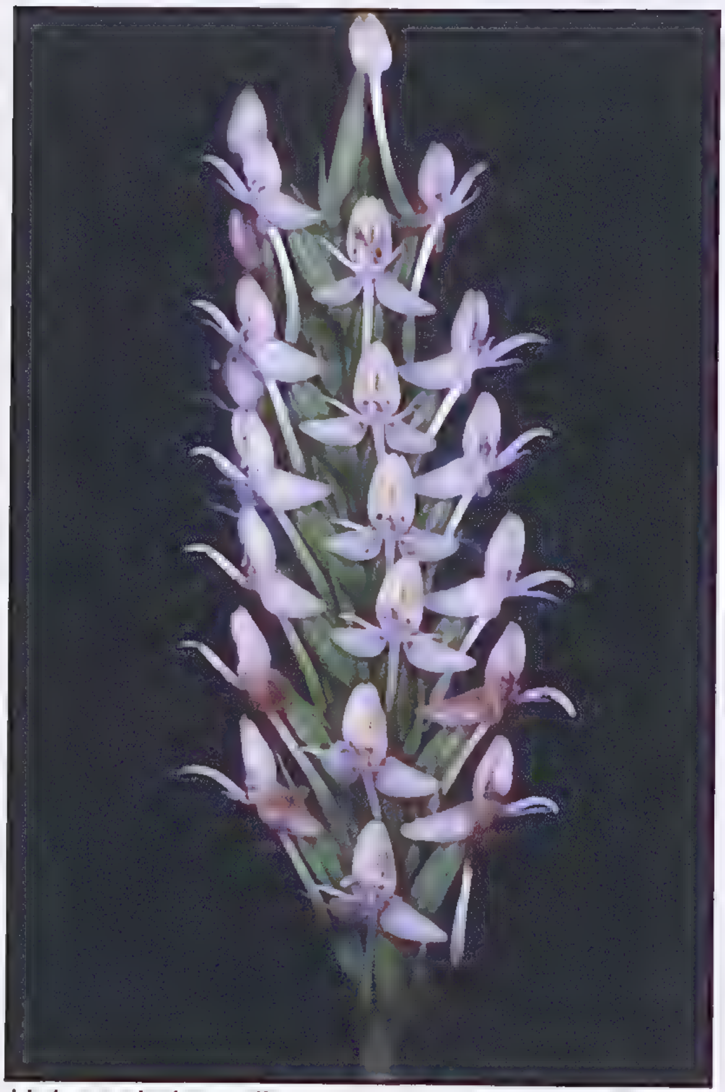
Dendrobium tetragonum Cunn.
Two varieties occur in the study area:
(1) var. ***giganteum*** Gilbert
Synonyms: *Dendrobium capitisyork* M.A. Clem. and D.L. Jones; *Dendrobium tetragonum* var. *tomentosum* Nicholls; *Tetrabaculum capitisyork* (M.A. Clem. and D.L. Jones) M.A. Clem. and D.L. Jones
(2) var. ***cacatua*** (M.A. Clem. and D.L. Jones) Dockrill
Synonyms: *Dendrobium cacatua* M.A. Clem. and D.L. Jones; *Dendrobium tetragonum* var. *hayesianum* (sensu Dockrill 1969); *Tetrabaculum cacatua* (M.A. Clem. and D.L. Jones) M.A. Clem. and D.L. Jones
Common name: Spider orchid
Vegetatively the two varieties that occur in the study area are indistinguishable, both having distinctive pseudobulbs that are club shaped with a swollen, four-angled apex and an extremely slender base. Both varieties are often found in trees along creek banks, overhanging the stream. Generally var. *giganteum* is found at lower altitudes from sea level to about 500 m and var. *cacatua*



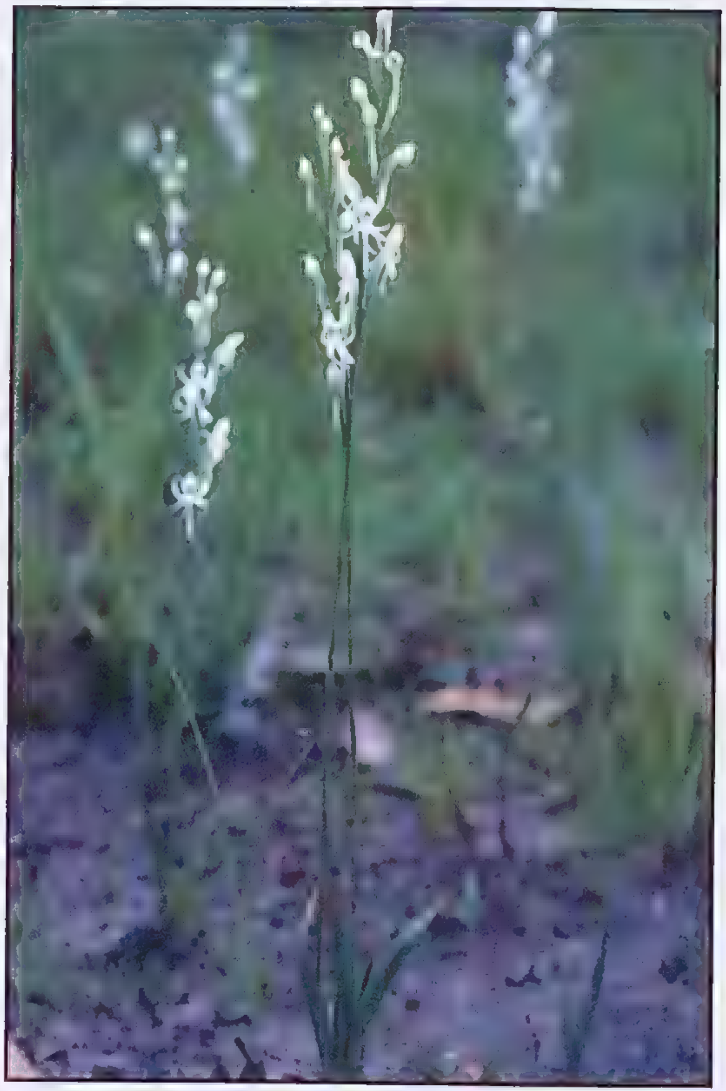
Dendrobium agrostophyllum



Caladenia carnea



Habenaria humpii



Habenaria propinquior

occurs above 500 m, but exceptions are not uncommon. In rainforests, plants may be found away from creeks, but usually in places where there is good air movement such as along the edge of the escarpment. The four angled or square stems are a distinguishing feature of this species, but the flowers are necessary to determine which variety a particular plant is, although the location gives a fair indication.

Dendrobium X grimesii C.T. White and Summerh.
This is a natural hybrid *of Dendrobium linguiforme* var. *nugentii* and *D. teretifolium* var. *fasciculatum*.
Synonym: *Dockrillia X grimesii* (C.T. White and Summerh.) Rauschert
An uncommon natural hybrid reported only occasionally. It grows on rainforest trees usually in exposed situations. Reported from near Mt Spec by Len Lawler. There are also unconfirmed reports from Crystal Creek. The record somewhat uncertain and a specimen is needed.

Dendrobium X ruppiosum Clemesha
This is a natural hybrid between *Dendrobium jonesii* and *D. speciosum* var. *curvicaule*
Synonym: *Thelychiton X ruppiosus* (Clemesha) M.A. Clem. and D.L. Jones
This natural hybrid grows on trees or rocks in areas where there is strong light. It is reasonably common where both parents occur and a search of such habitats will usually result in the discovery of at least one natural hybrid. Reported at Hermit Creek, also undoubtedly present at other creeks at moderate to high altitudes.

Dipodium ensifolium F. Muell.
This is one of the hyacinth orchids, differing from the others in the area in that it has leaves. It grows in open forests from sea level to the mountain tops, in well drained sites often in sandy soil. It occurs in habitats that are subject to regular fires, which it survives by regrowing from the underground parts. Flowering is October to December. It has also been reported in several locations such as between Paluma and Hidden Valley, on little Crystal Creek and along the road to Paluma.

Diuris luteola D.L. Jones
This species has been recorded from open forests between Paluma and Hidden Valley, growing on sloping sandy soil. The habitat is subject to fires which the plants survive by the underground tubers. In dry years, flowering plants are scarce or absent. Flowering is in July-August. For many years the yellow *Diuris* from Hidden Valley Rd was identified as *Diuris aurea*, a closely related species from southern Queensland.

Diuris oporina D.L. Jones
Synonym: *Diuris punctata* J.E. Sm. forma *blakeneyae* F.M. Bailey
This species grows in open forests at moderate altitude. It has been reported from open forests between Little Crystal Creek and Paluma, growing on slopes under eucalypts and casuarinas. It grows in areas subject to regular fires and survives them by its underground tuber. Flowering is April to August. It is part of the *Diuris punctata* complex and was formerly known under this name. It remains to be clarified whether there is one or more than one white and purple-flowered *Diuris* in north Queensland.

Drymoanthus minutus Nicholls
This is a tiny twig epiphyte that grows from low to moderate altitudes, often on trees overhanging watercourses. It has been recorded at Pappin's Rd just to the west of Jourama Falls and at upper Little Gin Creek, but is probably more common as it is very easily overlooked. Plants will flower when very small. Flowering is in summer during the wet season.

Eria eriaeoides (F.M. Bailey) Rolfe
Synonyms: *Eria diphylla* Schltr.
This is a rainforest species, usually growing near streams where humidity is high at altitudes from a little above sea level to 1000 m. Flowering can occur at any time, but mostly in spring. There is a reliable report of a small *Eria* from Cloudy Creek and some other eastern streams. I have not seen the plants or flowers, but it is most likely to be *E. eriaeoides*. Another possibility is *Eria queenslandica*, but this species has not previously been reported south of Tully.

Eria kingii F.Muell.
Synonyms: *Eria inornata* T.E. Hunt; *Eria*

linariiflora Rupp; *Eria liparoides* T.E. Hunt; *Eria ambasiensis* F.M. Bailey
This is a robust epiphyte of rainforest from sea level to about 800 m altitude, often in trees overhanging streams or in other situations where there is strong light. Flowering is from August to October. It is well known under the older name of *Eria inornata*. There is only one record of this species in the study area, at Waterfall Creek. This is at the extreme southern end of the distribution.

Gastrodia urceolata D.L. Jones
For most of the year no part of this saprophytic plant is above ground. The flowering stem is produced from October to December, but flowering plants are not present every year, the reason for this is probably related in some way to rainfall. The plants often grow in colonies in tall open forest with flooded gum and casuarinas, just to the west of the Paluma rainforests at relatively high altitude. The habitat is subject to regular fires.

Genoplesium sp
The identity of this species is uncertain. It could possibly be *Genoplesium alticolum* D.L. Jones and B. Gray. The flowering period is uncertain, but probably is December to April. Reported by Ray Robinson who found the non-flowering plant in disturbed soil beside the road a little east of Hidden Valley. The specific identity is uncertain, but it is certain to be a *Genoplesium*.

Geodorum densiflorum (Lam.) Schltr.
Synonyms: *Geodorum pictum* (R.Br.) Lindl.; *Geodorum neocaledonicum* Kraenzl.
This species is most abundant above 400 m, growing in open forests, usually in disturbed sites such as roadsides from the coastal lowlands and the mountains. The flowering stem is bent like an umbrella handle. It is common to see plants with seed pods which are up to 5 cm long and 3 cm wide. Flowering is November to February.

Habenaria hymenophylla Schltr.
Rainforest margins and moister open forests in the lowlands are the habitats of this species. The leaves appear after the first storm rains in December or January and the flowers follow soon after, the plants lasting in flower for about a month as the flowers open progressively. Later in the dry season, in about July, the leafy stems wither and the plants survive as tubers. Reported once in the study area from Rollingstone Creek.

Habenaria propinquior Rchb.f.
Synonym: *Habenaria ferdinandii* Schltr. sensu Dockrill Aust. Indig. Orchids 1 ed. 1 (1969).
Melaleuca viridiflora woodlands on the coastal plain are the main habitat of this attractive species that flowers in the wet season from, late December to April. The leaves are present from about November to June, disappearing during the dry season. It was formerly known as *Habenaria ferdinandii*, but that name is now applied to a species that occurs in the Northern Territory. It is a widespread and common species in the lowlands of tropical Queensland.

Habenaria rumphii (Brogn.) Lindl.
Synonyms: *Habenaria holtzei* F. Muell.
This is a lowland species that grows in grassy open eucalypt forests and flowers in the wet season in January to April. So far it has been reported only from on the northern side of Ollera Creek, but is probably more widespread as it is hard to find in the long grass. It is a widespread species in lowland tropical Australia, extending to New Guinea and South East Asia.

Hetaeria oblongifolia (Blume) Blume
Synonyms: *Hetaeria tenuis* (Lindl.) F.M. Bailey
This species grows leaf litter in shade on the rainforest floor at low to moderate altitudes. It has notably dark green glossy leaves, often with some older dead leaves on the lower stem. Flowering is in spring from July to October. It has been reported from Waterfall Creek at low altitude, but could be more widespread as it is easily overlooked on the floor of the rainforest.

Liparis angustilabris (F. Muell.) Blaxell
Synonyms: *Liparis reflexa* (R. Br.) var. *cuneilabris* (F. Muell.) Ridley; *Liparis cuneilabris* (F. Muell.) Benth.
This species grows low down on tree trunks or on rocks in shady conditions usually near streams in rainforest. It occurs in moist conditions mostly above 600 m altitude. It is very similar to *Liparis bracteata* which has two or more leaves while *L. angustilabris* has

a single leaf. Flowering is at the end of the wet season, about March to May. Recorded from Twin Falls on the Paluma Range road and also from Cloudy Creek.

Liparis bracteata T.E. Hunt
This species occurs mostly on rocks near streams in moist shady conditions at 800 m or more altitude. The distribution is given by Dockrill as from the Johnstone River north, but there is a *Liparis* present at Paluma which has two leaves. There is a possibility that it is *Liparis fleckeri* and there is a degree of confusion about the two species which could eventually prove to be conspecific. More work remains to be done on the Paluma plants. Flowering is in April and May. It has been reported at Twin Falls.

Liparis nugentiae F.M. Bailey
This is an epiphyte of rainforests growing high up in the trees where there is good light and air movement. It occurs above about 700 m altitude. Flowering is spring and early summer. Plants have been seen on fallen branches along the track to Witt's Lookout.

Malaxis ophrydis (König) Ormerod
Synonyms: *Malaxis latifolia* J.E. Smith; *Dienia congesta* Lindl.; *Liparis bernaysii* (F. Muell.) F.M. Bailey; *Microstylis bernaysii* F. Muell.
This deciduous terrestrial grows on the forest floor in leaf litter in rainforests or moister open forests, always in shady conditions and in well drained sites. It grows from the lowlands to the mountains. The light green leaves are attractive, but the flowers are tiny. This species has had a multitude of names applied to it and those given above represent only a small sample. This is because it is a widespread species extending as far afield as India. Recently there has been a proposal that it should be known as *Dienia congesta* but current international opinion seems to be against this name. It was previously very well known as *Malaxis latifolia*. Flowering is in the wet season when the leaves are present. Most sightings have been from the creeks flowing east from the Paluma Range, but it could appear almost anywhere in the moister open forests of the study area.

Microtis sp
This species is possibly *M. unifolia*. *M. parviflora* is generally very similar, but is thought to occur in southern Australia, however flowering specimens are needed to determine the identity of these plants. The flowering period is uncertain, but probably is August to October. Reported by Ray Robinson who found the non-flowering plant in open forest near the road a little east of Hidden Valley. This genus is listed provisionally but a specimen is needed to confirm its occurrence and determine the species.

Mobilabium hamatum Rupp
This is an epiphyte of rainforest trees often in exposed situations and always at higher altitudes. There are some good plants in the picnic area at McClelland's Lookout at Paluma, all well above the level where people can reach them. The hooked ends of the leaves make this species easy to identify. Flowering is in late winter and early spring from July to September.

Nervilia holochila (F. Muell.) Schltr.
Synonyms: *Pogonia holochila* F. Muell.
The flowers emerge in November or December after the first storm rains, while there is no leaf. They last only a week or two and plants often do not flower if conditions have not been favourable. The light green leaf emerges in January in response to the onset of the wet season and withers during the dry winter. This is a species of well-drained open forest sites at a range of altitudes. It often grows in large colonies. This species has been reliably reported from the vicinity of Jourama Falls, but is likely to be more widespread.

Nervilia uniflora (F. Muell.) Schltr.
Synonyms: *Pogonia uniflora* F. Muell.
This is predominantly a lowland species growing in shady sheltered sites such as creek banks in rich soil and leaf litter. The flowers appear in November and December after the first storms of the wet season. The leaves follow the flowers appearing in December to January and lasting until well into the dry winter months. The plants grow in large colonies, but in some years no flowers may appear. The irregular heart shaped leaf held well above the ground is distinctive. This species has been recorded from Pappins Rd to the west of Jourama Falls at low altitude, however it is small and easily overlooked and

may be more abundant.

Oberonia complanata (Cunn.) M.A. Clem. and D.L. Jones
Synonyms: *Oberonia iridifolia* F. Muell.; *Oberonia muelleriana* Schltr.
This species grows in situations with good light and air movement from the lowlands to the mountains, usually in rainforests and mangroves on trees or rocks. Flowering can occur at any time, but is most common from August to October. Plants growing in the sun are almost yellow. This species has been reported from Paluma and Jourama Falls and from some of the creeks that flow from the ranges to the coast.

Oberonia titania Lindl.
Synonyms: *Oberonia palmicola* F. Muell.
This tiny species is better known under the old name of *Oberonia palmicola*. It occurs in rainforests, sometimes growing low down on branches, often in places where there is good light, but not full sunlight. It occurs from sea level to the mountains. Flowering can be spasmodic, but mostly in the wet season from January to April. Plants have been reported at Twin Falls and Cloudy Creek as well as Jourama Falls.

Octarrhena pusilla (F.M. Bailey) Dockrill
Synonyms: *Phreatia baileyana* Schltr.
This is one of the smallest of the Australian epiphytes. It grows on the upper branches of rainforest trees or occasionally on rocks above 800 m altitude. Its tiny size is a distinguishing feature. It is not often seen except on fallen trees. Flowering is spasmodic throughout the year. Reported from various sites near the Paluma Township.

Peristeranthus hillii (F. Muell.) P.F. Hunt
Synonyms: *Saccolabium hillii* F. Muell.; *Ornithochilus hillii* (F. Muell.) Benth.
This species occurs in rainforests at low to moderate altitudes. It is an uncommon species most often seen in gallery forest along creeks. Flowering is from August to October. Reported at Paluma, Big Crystal Creek and other creeks including Waterfall Creek and Jourama Falls.

Phaius tancarvilleae (Banks ex L. Her.) Blume
Common name: swamp orchid
Synonyms: *Phaius grandifolius* Lour.; *Phaius carronii* F. Muell.; *Phaius tankervilliae* (Banks) R.Br.
One of the most attractive of Australian orchids, the swamp orchid has been heavily collected. It is not certain if it still exists in the study area as the only report was of plants growing at the base of the Paluma Range more than twenty years ago. It grows in soaks and swamps, in sun or shade. Many forms are self-pollinating so that only one or two flowers are open at a time, while others do not self pollinate and have several flowers open at a time. Flowering is in late winter and spring and a plant may be in flower for two months as the flowers open successively. As well as the effects of collecting, the plants are often dug up by wild pigs, adding to the threat to the species.

Phalaenopsis amabilis (L.) Blume subsp. ***rosenstromii*** (F.M. Bailey) E.A. Christ.
Common names: Moth orchid; Mt Spec orchid
Synonyms: *Phalaenopsis rosenstromii* F.M. Bailey; *Phalaenopsis amabilis* var. *papuana* Schltr.
This species is sometimes referred to as the Mt Spec orchid, but it does not occur on Mt Spec. It is essentially a lowland species growing in the gallery forests along the streams that flow down from Mt Spec and nearby ranges. Once quite abundant along parts of creeks from about Rollingstone to Ingham, it has been seriously depleted by illegal collecting, so that it is now hard to see. However good populations still exist in inaccessible country and it should survive. It is one of the world's finest horticultural species and has been used in countless hybrids. Flowering is in the wet season from December to March, but can occur at any time.

Pholidotia imbricata Lindl.
Synonyms: *Pholidotia pallida* Holttum
The study area is the southern end of the range of this widespread species which grows in rainforests and moist open forests from sea level to the mountains, usually in sites where there is good light. Flowering is at the end of the wet season from March to May. Reported from Jourama Falls and Waterfall Creek. It could also be present near Crystal Creek.

Phreatia crassiuscula F. Muell. ex Nicholls
This species grows in fairly exposed situations in rainforests such as along creeks or on exposed ridge tops, usually above 500 m altitude. It often grows on trees with a fibrous bark. Flowering can occur at any time but is most common from October to January. This is a quite common species at Paluma, occurring near Witt's Lookout and in many of the creeks that flow down from the range.

Plectorrhiza brevilabris (F. Muell.) Dockrill
Common name: Tangle orchid
Synonyms: *Cleisostoma brevilabre* F. Muell.; *Sarcochilus brevilabris* (F. Muell.) F. Muell.
The plants are often pendulous, sometimes forming a tangle of aerial roots. They grow on twigs often low down in shade in rainforests above about 500 m altitude. Flowering is November to February. This is a common species in the Paluma rainforests, also along the creeks that flow down from the escarpment.

Pseudovanilla foliata (F. Muell.) Garay
Common name: Giant climbing orchid
Synonyms: *Galeola foliata* (F. Muell.) F. Muell.
This is the only climbing or scrambling orchid in the study area. It can form a large mass of stems and flowers over rotten logs or stumps and may climb up tree trunks, using roots that are produced along the stem. It is a plant of shady moist rainforests from sea level to the mountains. Flowering is from October to January. This is a saprophyte, i.e. lacking chlorophyll and dependent on a fungus in the soil, and is impossible to grow. Therefore it should never be taken from the bush. It was well known for many years as *Galeola foliata*. Plants have been reported from Paluma and Mt Halifax.

Pterostylis aquilonia D.L. Jones and B.Gray
Synonyms: *Diplodium aquilonium* (D.L. Jones and B.Gray) D.L. Jones and M.A. Clem. This rarely seen species is very similar to *Pterostylis grandiflora* R. Br. and was separated from that species as recently as 1997. It occurs in grassy open forests probably above 800 m and flowers in May and June. Careful examination of specimens from the Paluma area should be undertaken to confirm that this is *P. aquilonia* and not *P. grandiflora*. There is a specimen in Queensland Herbarium from Mt Spec. Dockrill gives the range of *P. grandiflora* in the tropics as Paluma Range to Seaview Range and some of the higher ranges surrounding the Atherton Tableland.

Pterostylis hildae Nicholls
This species is very similar to *Pterostylis stricta*, but has fewer larger leaves in the rosette and smaller flowers. In *P. hildae* the lip is gently curved, while in *P. stricta* it has a sharp bend in it so that the end is at right angles to the base and has fine cilia along the margin. More work needs to be done at Paluma to determine if both species are present as some specimens seem to be halfway between the two. It occurs in moist open forests often growing in moss and leaf litter on rocks at 600 m and above. Flowering is in autumn. The rosettes are present in the wet season from late spring to autumn.

Pterostylis parviflora R. Br.
Synonym: *Speculantha parviflora* (R.Br.) D.L. Jones and M.A. Clem.
The flowering stem appears first followed soon after by the rosette of leaves. This is a species that occurs in heath-like communities in open forest rocky areas with leptospermums and wattles, west of the rainforest generally above 600 m altitude. Flowering is in late summer and autumn. Flowering specimens were collected on Mt Zero property in late May 2003. Several new species very similar to *Pterostylis parviflora* have been described from south east Queensland and southern states. In *Orchids of Australia* by Riley and Banks the distribution of *Pterostylis parviflora* is given as being restricted to New South Wales and it is likely that the North Queensland plants will eventually be shown to be a discrete species.

Pterostylis stricta Clemesha and B. Gray
For differences with *P. hildae* see under that species above. *Pterostylis stricta* grows above 600 m altitude in moist open forests and on the edge of rainforests. Flowering is in autumn. Recorded at Hermit Creek, north of the Paluma Dam.

Robiquetia gracilistipes (Schltr.) J.J. Smith
Synonyms: *Saccolabium tierneyanum* Rupp; *Robiquetia tierneyana* (Rupp) Dockrill
This is predominantly a lowland species often found in rainforest that overhangs

streams. It grows equally well in shade or bright light. Flowering is from March to May. It was previously well known as *Robiquetia tierneyana*. Reported from Waterfall Creek, but could be present in rainforest along other creeks.

Sarcochilus ceciliae F. Muell.
Common name: Fairy bells
This dainty and attractive species occurs on exposed rock faces, usually in full sun, but sometimes shaded by vegetation. The thick roots spread out along the rocks seeking crevices where some moisture remains. It grows mostly in open forest situations above about 500 m altitude. Flowering is from October to December. Reported from the upper reaches of the creeks flowing down from the escarpment and on rocks near the road to Hidden Valley.

Sarcochilus falcatus R. Br.
Common name: Orange blossom orchid
This is a widespread species occurring from Victoria to about Cooktown. In the tropics it always grows above about 600 m altitude in rainforests usually high in the trees often on twigs where there is good air movement and light. Flowering is in June to July. Reported from the Mt Spec area, but a specimen is required to confirm the report.

Taeniophyllum lobatum Dockrill
The roots of this tiny leafless epiphyte contain chlorophyll and have taken the place of the leaves. This species occurs at about 800 m to 900 m altitude, growing on trees in rainforests in sites that receive good air movement and reasonable light. Flowering is from September to November. Recorded at McClelland's Lookout on trees in the picnic area.

Taeniophyllum muelleri Lindl. ex Benth.
Synonyms: *Taeniophyllum wilkianum* T.E. Hunt;; *Taeniophyllum cymbiforme* T.E. Hunt and sometimes misidentified as *T. glandulosum* Blume.
The roots of this tiny leafless epiphyte contain chlorophyll and have taken the place of the leaves. It grows from sea level to about 1000 m altitude in rainforests, sometimes low down on trees on forest margins, often on twigs. Flowering can occur at any time of the year. This species has been known as *T. wilkianum* and *T. glandulosum* at different times over the years. Recorded at Twin Falls and in gallery forest along several of the creeks that flow down from the escarpment.

Thelymitra nuda R. Br.
Common name: Sun orchid
Synonyms: Previously misidentified as *Thelymitra aristata* Lindl.
This species mostly is recorded from above 600 m altitude, growing in open forests or woodlands west of the rainforests near the road to Hidden Valley. It often grows along seasonal watercourses and usually flowers only in wetter years. The name sun orchid comes from the habit of the flowers opening fully only in bright sunlight. Flowering is in August to October.

Possibilities and doubtful records
Bulbophyllum lilianae very doubtful record, probably does not occur this far south.
Bulbophyllum bowkettiae could be present but no reports, probably does not occur this far south.
Bulbophyllum gadgarrense very doubtful record, probably does not occur this far south.
Bulbophyllum nematopodum doubtful record. No evidence that it occurs here, but it has been seen north of the study area and there is a report at Mt Elliot to the south.
Cheirostylis ovata this species is probably present, but there are no records. It grows in leaf litter on the rainforest floor or in pockets on rocks and is easily overlooked. It occurs to the south and to the north of the study area.
Dendrobium prenticei one specimen in Queensland Herbarium needs checking (but specimen on loan at time of writing).
Dendrobium toressae possibly present, but no records.
Dipodium elegantulum a leafless terrestrial, probably present in open forests, but no records.
Pomatocalpa macphersonii possibly present but no records.
Pterostylis procera occurs at Wallaman Falls, just to the north, could well be present.
Pterostylis taurus likely to be in the open forests around Hidden Valley, but no reports to date.
Pterostylis acuminata recorded in Dockrill, but unlikely to be present - may be *P. hildae*

or *P. stricta*.

Sarcochilus borealis possible occurrence, mentioned in Dockrill, but no specimens.

Sarcochilus serrulatus tenuous verbal reports, not confirmed.

Zeuxine oblonga no records, but likely to be present, as it is recorded from Bluewater just to the south of the study area.

Species in different vegetation types.

Paluma rainforests.

Anoectochilus yatesae
Bulbophyllum evasum
Bulbophyllum johnsonii
Bulbophyllum macphersonii
Bulbophyllum newportii
Bulbophyllum radicans
Calanthe triplicata
Cymbidium madidum
Dendrobium adae
Dendrobium agrostophyllum
Dendrobium fellowsii
Dendrobium gracilicaule
Dendrobium jonesii
Dendrobium lichenastrum
Dendrobium linguiforme var. *nugentii*
Dendrobium speciosum var. *curvicaule*
Dendrobium tetragonum var. *cacatua*
Dendrobium tetragonum var. *giganteum*
Dendrobium x *ruppiosum*
Eria eriaeoides
Hetaeria oblongifolia
Liparis angustilabris
Liparis bracteata
Liparis nugentiae
Malaxis ophrydis
Mobilabium hamatum
Oberonia titania
Oberonia complanata
Octarrhena pusilla
Phreatia crassiuscula
Plectorrhiza brevilabris
Pseudovanilla foliata
Pterostylis stricta
Sarcochilus falcatus
Taeniophyllum lobatum
Taeniophyllum muelleri

Hidden valley open forests

Caladenia carnea
Cryptostylis subulata
Cymbidium canaliculatum
Dendrobium aemulum
Dendrobium speciosum var. *curvicaule*
Dipodium ensifolium
Diuris luteola
Diuris oporina
Genoplesium sp
Geodorum densiflorum
Microtis sp
Sarcochilus ceciliae
Thelymitra nuda

Paluma tall open forests and casuarina forests

Acianthus borealis
Arthrochilus sp.
Caladenia carnea
Chiloglottis longiclavata
Corybas barbarae
Corybas cerasinus
Cymbidium madidum
Cymbidium suave
Dendrobium agrostophyllum
Dendrobium fellowsii
Dendrobium jonesii
Dendrobium tetragonum var. *cacatua*
Gastrodia urceolata
Geodorum densiflorum
Malaxis ophrydis
Pterostylis aquilonia
Pterostylis hildae
Pterostylis parviflora
Pterostylis stricta

Lowland open forests

Dendrobium canaliculatum
Dendrobium discolor
Dipodium ensifolium
Geodorum densiflorum
Habenaria rumphii
Habenaria ferdinandii
Habenaria hymenophylla (rainforest margins)
Phaius tancarvilleae

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John Nuss, a Townsville native orchid expert and president of the Townsville branch of the Australasian Native Orchid Society provided valuable assistance by helping on several field trips and by making available his notebooks that contain records of numerous field trips.

Ray Robinson a native orchid enthusiast from Townsville provided information on the orchids of the area gleaned from many visits over the years.

Roy Mackay of Paluma provided information on the occurrence of native orchids of the Paluma area.

Further reading

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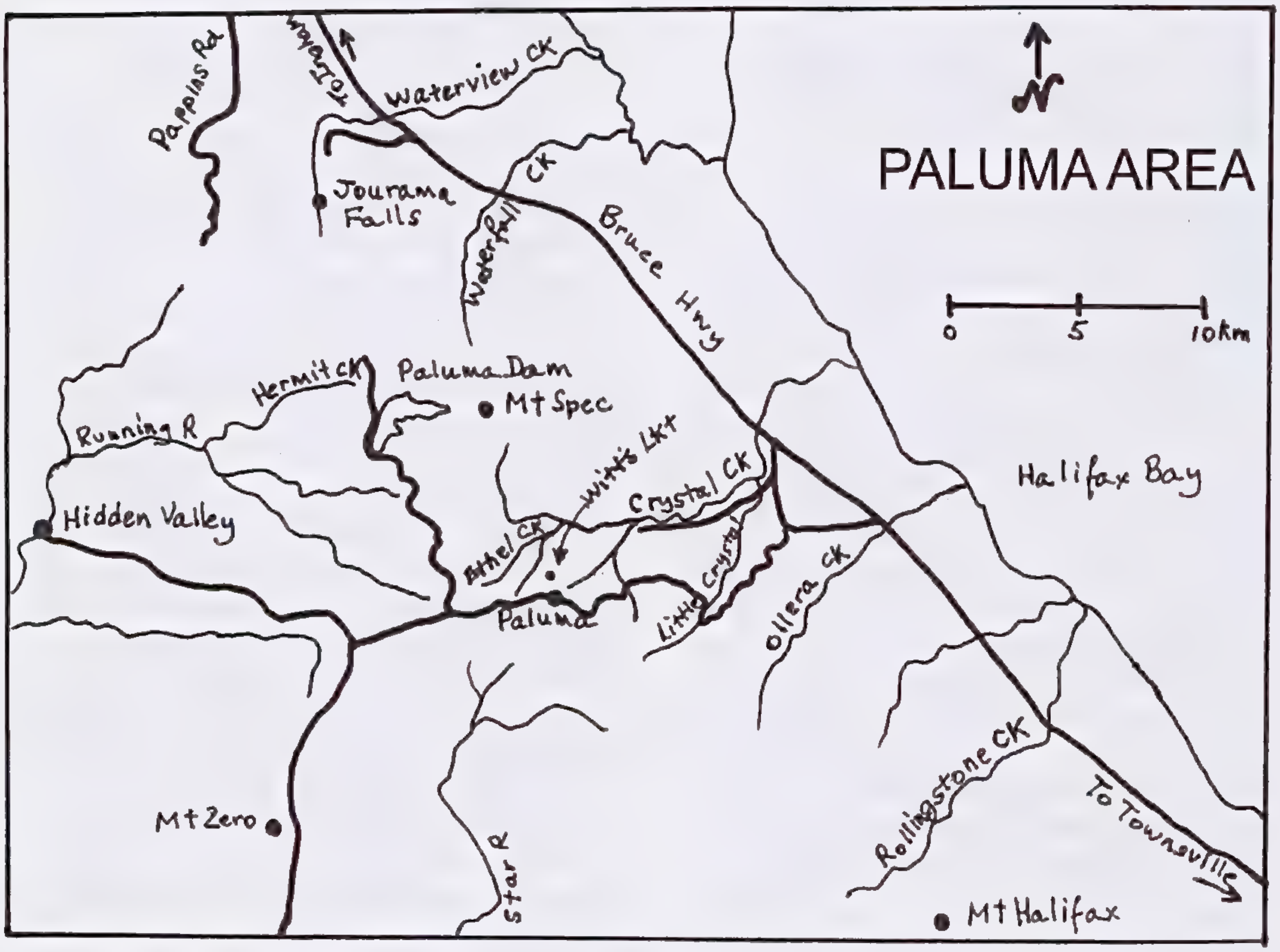
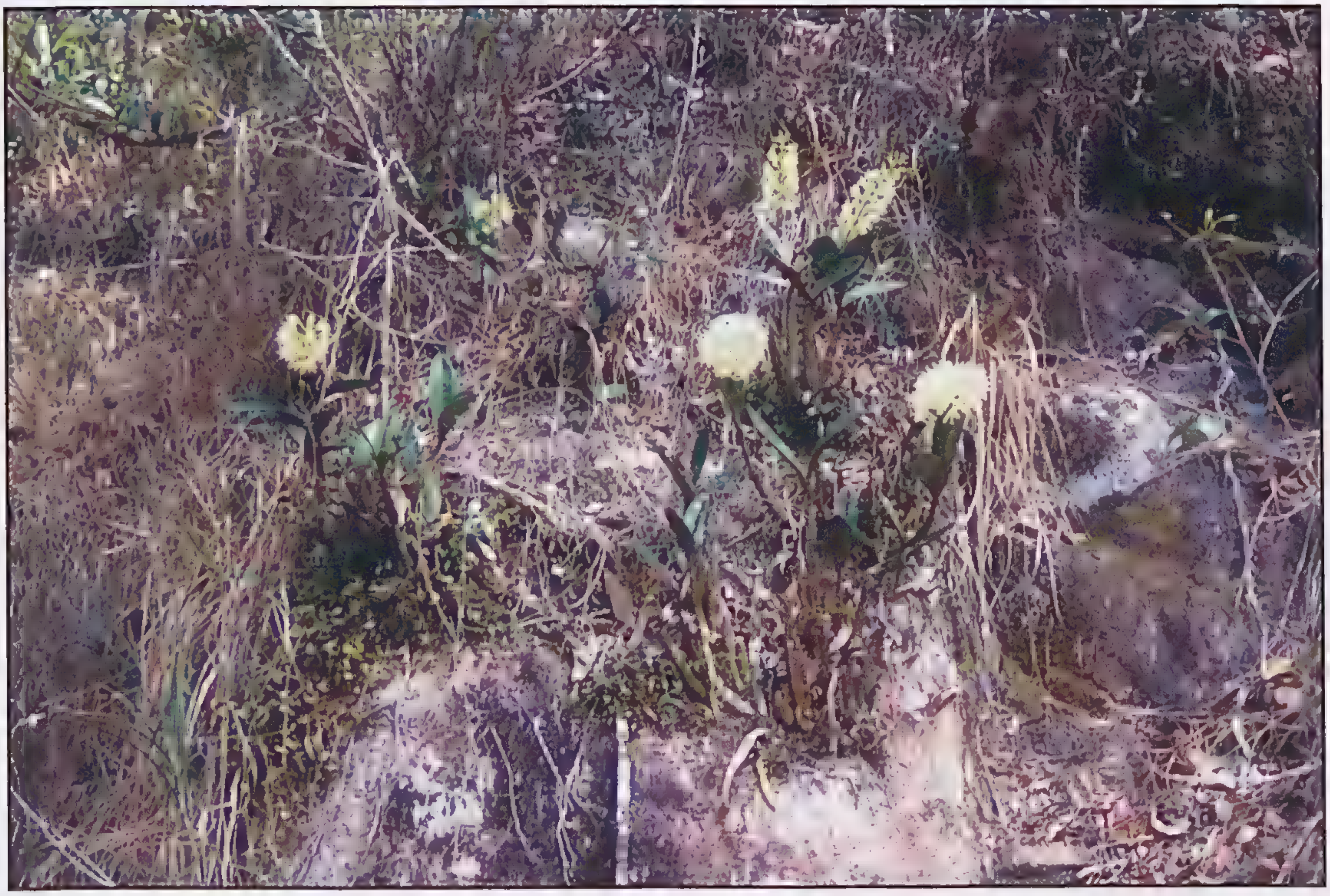


Ethel Creek, Paluma.



Dendrobium speciosum var. *curvicaule* growing on rocks at Ethel Creek.

Acianthella, a New Genus in the *Acianthus* Alliance (Orchidaceae)

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ABSTRACT: The genus *Acianthella* is proposed as a segregate from *Acianthopsis* and the necessary nomenclatural transfers are made. This satisfies anomalies identified during analysis of nuclear DNA sequence data of the *Diurideae*.

Introduction

The *Acianthus* alliance has been the subject of recent studies (Szlachetko 2001a, 2002, Jones *et al.* 2002) resulting in the segregation of several new genera. Confusion has resulted as to the status of *Acianthopsis*. That confusion is clarified here and the new genus *Acianthella* is erected to accomodate a small group of distinct species.

Taxonomic History

Szlachetko (2001) raised the whole of *Acianthus* subgenus *Univiscidiatus* to generic rank, but this proposal was invalid as it is contrary to Art. 20.2 of ICBN (Greuter *et al.* 2000). In the meantime Jones *et al.* (2002) described *Acianthopsis* to accomodate the species in *Acianthus* subgenus *Univiscidiatus* section *Macropetalus* Kores. Szlachetko, in an unsubstantiated date of 31st December, 2001 (here cited as Szlachetko 2002), renamed *Univiscidiatus* also as *Acianthopsis* and made the necessary nomenclatural transfers. The question of priority arises since the same generic name has been proposed, but based on different types, in two different publications. At first impression Szlachetko 31st December, 2001 takes priority over Jones *et al.* 2002.

However, information from the Royal Botanic Gardens, Kew indicates that the issue of the Polish Botanical Journal containing Szlachetko's paper was not actually published until after mid 2002 since the earliest copies of the journal were not received at European and American herbaria until then viz: Geneva 8/7/2002; Royal Botanic Gardens, Kew 16/7/2002; New York Botanic Gardens 10/9/2002. (K.Challis pers. comm.). The publication date for *The Orchadian* 13(10) was 31/1/2002. Thus *Acianthopsis* D.L.Jones et M.A.Clem. takes precedence over *Acianthopsis* D.L.Szlachetko.

Our interpretation of *Acianthopsis* is somewhat different to that of Szlachetko and it was our original intention in Jones *et al.* (2001) to segregate the group of species with tiny green flowers into a separate genus. The erection of that new genus was delayed by the initial elevation by Szlachetko (2001) of *Acianthus* subgenus *Univiscidiatus* to generic rank and then by the confusion over the status of *Acianthopsis*. The decision to recognise *Acianthella* as distinct from *Acianthopsis* D.L.Jones & M.A.Clem., is also supported by results from plastid DNA sequence data (Kores *et al.* 2001). In a combined *matK* and *trnL-F* tree, representatives of these two genera (*A. confusus* and *A. elegans* vs. *A. cymbaraliifolius*) are separated by *Stigmatodactylus*, thus rendering Szlachetko's concept of *Acianthopsis* paraphyletic. The new genus is here described.

ACIANTHELLA D.L.Jones et M.A.Clem., **gen. nov**. Affinis *Aciantho* R.Br., sed sepalis apicibus integris sine extensionibus teretibus; labello sine glandibus basalibus; callo constans ex columine vel patella media debili sine canale centrali. Type species: *Microstylis amplexicaulis* F.M.Bailey (*Acianthus amplexicaulis* (F.M.Bailey) Rolfe).

Acianthus subgenus *Univiscidiatus* section *Univiscidiatus* Kores, *Allertonia* 7(3): 163 (1995).

Acianthopsis D.L.Szlachetko, *Polish Bot. J*. 46(2): 143 (July 2002), *non* Jones & Clements (31 Jan. 2002). syn. nov. Type: *Acianthus elegans* Rchb.f.

Etymology

From *Acianthus*, another genus of orchid and -*ella*, diminutive suffix.

Recognition

Recognised by small, green or greenish flowers; dorsal sepal and lateral sepals similar in shape and size; petals narrowly linear, straight; sepal tips lacking linear-terete extensions; labellum lacking basal glands, although sometimes with enlarged basal parts of the callus ridges; and, callus consisting of a weak medial ridge or plate without a central channel.

Distribution

A genus of about seven species distributed in Australia and New Caledonia.

New Combinations:

Acianthella aegeridantennata (N.Hallé) D.L.Jones et M.A.Clem., **comb. nov.**
Basionym: *Acianthus aegeridantennatus* N.Hallé, Fl. Nouv-Caléd. et Depend. 8: 434, f.128 (1978).

Acianthella amplexicaulis (F.M.Bailey) D.L.Jones et M.A.Clem., **comb. nov.**
Basionym: *Microstylis amplexicaulis* F.M.Bailey, Bot. Bull. Dept. Agric. Queensland 3: 18 (1891).
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Basionym: *Acianthus confusus* Guillaum., Bull. Soc. Bot. France 69: 508 (1922).

Acianthella elegans (Rchb.f.) D.L.Jones et M.A.Clem., **comb. nov.**
Basionym: *Acianthus elegans* Rchb.f., Linnaea 41: 56 (1877).

Acianthella heptadactyla (Kraenzl.) D.L.Jones et M.A.Clem., **comb. nov.**
Basionym: *Acianthus heptadactylus* Kraenzl., Notul. Syst. 4: 132 (1928).
Acianthella macroglossa (Schltr.) D.L.Jones et M.A.Clem., **comb. nov.**
Basionym: *Acianthus macroglossus* Schltr., Bot. Jahrb. Syst. 39: 40 (1906).

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Basionym: *Acianthus sublestus* Dockrill, North Queensland Naturalist 23(110): f. (1956).

Key to genera of the *Acianthus* alliance (including *Townsonia* and *Spuricianthus*)

1. Roots lacking tubers **2**
1: Roots with tubers **3**

2. Leaf lamina erect; flowers lacking petals; callus with a weak central plate; column lacking any anterior appendage ***Spuricianthus***
2: Leaf lamina horizontal; flowers with petals; callus with an enlarged central plate, often with accessory keels and ridges; column with an anterior appendage and often also with a fleshy projecting basal appendage ***Stigmatodactylus***

3. Leaves multiple; lamina erect; column winged throughout ***Townsonia***

3: Leaf solitary: lamina horizontal; column unwinged or with vestigial wings at the apex **4**

4. Callus with a narrow, reticulate, central longitudinal channel **5**
4: Callus without a central channel **6**

5. Sepals ending in linear-terete structures; column wings absent; pollen waxy ***Acianthus***

5: Sepals with long linear-attenuate extensions, never linear-terete; column wings vestigial; pollen mealy ***Nemacianthus***

6. Tubers lateral; posterior margin of the stigma with a prominent dactyliform appendage; callus prominent, consisting of a well-developed ridge or plate, often with accessory ridges and keels; column with an anterior appendage and often also with a fleshy projecting basal appendage ***Stigmatodactylus***

6: Tubers terminal; posterior margin of stigma smooth; callus poorly developed or vestigial, consisting of a smooth central plate or low ridge; column usually lacking an anterior appendage, never with a fleshy projecting basal appendage **7**

7. Flowers small; sepals similar in shape and size; petals narrow, 1-veined ***Acianthella***

7: Flowers moderately sized; dorsal sepal dissimilar in shape and size to the lateral sepals; petals broad, 3-5-veined ***Acianthopsis***

Acknowledgements

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-oOo-

Phil and Yvonne present seedlings of the same name to Peter Fetherston and Barry Collins.

Angie, Phil and Brian call out the raffle prizes.

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Barry Collins, Phil Spence, Chris Dalrymple, Wal Upton and Gerald McCraith AM.

Phil made sure we all had an enjoyable afternoon.

Photos Bill Dobson